PB-244 280

APPLICATION OF AUTO-QUAL MODELLING SYSTEM TO THE PATUXENT RIVER BASIN

Thomas H. Pheiffer, et al

Environmental Protection Agency
Annapolis, Maryland

December 1973

DISTRIBUTED BY:

NTIS
National Technical Information Service
U. S. DEPARTMENT OF COMMERCE

BIBLIOGRAPHIC DATA SHEET	1. Report No. EPA-903/9-74-013	2.	PB 244 280

4. Title and Subtitle
APPLICATION OF AUTØ-QUAL MODELLING SYSTEM
TO THE PATUXENT RIVER BASIN

5. Report Date
December 1973

6.

7. Author(s)
Thomas H. Pheiffer and Norman L. Lovelace

8. Performing Organization Rept. No. 58

9. Performing Organization Name and Address
U.S. Environmental Protection Agency
Region III - Annapolis Field Office
Annapolis Science Center
Annapolis, Maryland 21401

10. Project/Task/Work Unit No.

11. Contract/Grant No.

12. Sponsoring Organization Name and Address
U.S. Environmental Protection Agency
Region III - Curtis Building
6th & Walnut Streets
Philadelphia, Pennsylvania 19106

13. Type of Report & Period Covered Math Model Application - 1973

14.

15. Supplementary Notes

16. Abstracts

During the 1973 summer sampling season water quality data were collected in the Patuxent River Basin in order to calibrate and verify mathematical models for the purposes of dissolved oxygen and salinity prediction. The calibration and verification processes are described together with a presentation of the field data for further application by interested parties.

17. Key Words and Document Analysis. 17a. Descriptors

Water Quality
Math Models
Patuxent River Basin

Patuxent River Basin; Water Quality Data Collection; Math Model Calibration and Verification; Presentation of Data and Model Results

17b. Identifiers/Open-Ended Terms

17c. COSATI Field/Group

PRICES SUBJECT TO CHANGE

18. Availability Statement	19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 199
	20. Security Class (This Page) UNCLASSIFIED	22. Price 7.00/2.25

THIS FORM MAY BE REPRODUCED

238032

EPA-903/9-74-013

PB244280

APPLICATION OF AUTO-QUAL MODELLING SYSTEM TO THE PATUXENT RIVER BASIN

December 1973

Technical Report 58
Annapolis Field Office
Region III
Environmental Protection Agency

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
US Department of Commerce
Springfield, VA. 22151

The model described herein has been utilized by the Maryland Environmental Service to evaluate water quality plans for the Patuxent River Basin. Specifically, the model was used to predict the dissolved oxygen response that would be expected to occur as a result of the BOD loadings projected for the major discharges in the free-flowing Patuxent and Little Patuxent Rivers in years 1980 and 2000 under two alternative facilities plans, i.e., with regional treatment and without regional treatment. The seven day-ten year low flows were used for all model production runs.

The facilities plans for the Patuxent River Basin are described in The Patuxent River Basin Water Quality Management Plan prepared by the Maryland Environmental Service.

Preceding page blank

EPA-903/9-74-013

Annapolis Field Office
Region III
Environmental Protection Agency

APPLICATION OF AUTO-QUAL MODELLING SYSTEM TO THE PATUXENT RIVER BASIN

Thomas H. Pheiffer
Norman L. Lovelace *

Annapolis Field Office Staff

Maryann L. Bonning
Tangie L. Brown
Leo J. Clark
Gerald W Crutchley
Daniel K. Donnelly
Gerard R. Donovan, Jr.
Margaret E. Fanning
Bettina B. Fletcher
Norman E. Fritsche
Victor Guide
George H. Houghton
Patricia G Johnson
Ronald Jones
Sigrid R. Kayser
Donald W. Lear, Jr.
Evelyn P. McPherson
James W. Marks
Margaret S. Mason
Margaret B. Munro
Maria L. O'Malley
Thomas H. Pheiffer
Susan K. Smith
Earl C. Staton
William M. Thomas, Jr.
Robert L. Vallandingham
Orterio Villa, Jr.
Deborah A. Valentine

*EPA, Washington, D.C.

ABSTRACT

During the 1973 summer sampling season water quality data were collected in the Patuxent River Basin in order to calibrate and verify mathematical models for the purposes of dissolved oxygen and salinity prediction. The calibration and verification processes are described together with a presentation of the field data for further application by interested parties.

TABLE OF CONTENTS

I. INTRODUCTION PAGE 1

II. STUDY AREA DESCRIPTION 2

III. DATA ACQUISITION 3

IV. MODEL APPLICATION 7

V. MODEL CALIBRATION AND VERIFICATION 8

VI. PATUXENT MAINSTEM CALIBRATION AND VERIFICATION 9

VII. LITTLE PATUXENT CALIBRATION AND VERIFICATION 11

VIII. PATUXENT ESTUARY CALIBRATION AND VERIFICATION 12

IX. DISCUSSION 16

X. APPENDICES 36

A. Patuxent River Basin Map and Station Descriptions
B. Stream Discharge Data
C. Wastewater Treatment Plant Data
D. Water Quality Sampling Data

LIST OF FIGURES

Number	Title	Page
1	Patuxent River DO Model Calibration, July 15-19, 1968	17
2	Patuxent River DO Model Calibration, June 4-7, 1973	18
3	Patuxent River DO Model Verification, July 9-12, 1973	19
4	Little Patuxent River DO Model Calibration, June 7, 1973	20
5	Little Patuxent River DO Model Verification, July 9, 1973	21
6	Little Patuxent River DO Model Verification, July 10, 1973	22
7	Little Patuxent River DO Model Verification, July 11, 1973	23
8	Little Patuxent River DO Model Verification, July 12, 1973	24
9	Patuxent Estuary Salinity Model Calibration, June 7, 1973	25
10	Patuxent Estuary Salinity Model Verification, July 9, 1973	26
11	Patuxent Estuary Salinity Model Verification, July 10, 1973	27
12	Patuxent Estuary Salinity Model Verification, July 11, 1973	28
13	Patuxent Estuary Salinity Model Verification, July 12, 1973	29
14	Patuxent Estuary DO Model Calibration, June 7, 1973	30
15	Patuxent Estuary DO Model Calibration, July 12, 1973	31

LIST OF FIGURES (cont.)

Number	Title	Page
16	Patuxent Estuary DO Model Verification, October 9, 1973	32
17	Patuxent Estuary DO Model Verification, October 10, 1973	33
18	Patuxent Estuary DO Model Verification, October 11, 1973	34
19	Patuxent Estuary DO Model Verification, October 12, 1973	35

INTRODUCTION

The purpose of this report is to set forth the progress which has been made on the application of mathematical models by the Annapolis Field Office to the Patuxent River System.

Single channelled models from the AUT0-QUAL Modelling System have been calibrated and validated for the free-flowing mainstem of the Patuxent River and the Little Patuxent River. The models used in this project have successfully predicted dissolved oxygen concentrations in both the free-flowing Patuxent and the Little Patuxent Rivers during the week of July 9, 1973. The models of these two areas are available to predict dissolved oxygen response to changes in volume and/or concentration of point sources of carbonaceous and nitrogenous BOD loadings under various stream flow conditions and temperatures. When quantified, non-point sources of pollution can be input into the AUT0-QUAL Modelling System and the effects of the non-point sources of pollution can be predicted.

Progress on model application to the Patuxent Estuary includes the calibration and verification of a model capable of predicting salinity profiles throughout the estuary and dissolved oxygen profiles in part of the estuary. The affect of freshwater inflows into and diversions out of the estuary on salinity regimes can now be predicted throughout the entire length of the estuary. The critical portion of the estuary, i.e. from Benedict Bridge (river mile 22.2) upstream to Hardesty, the approximate head of tide (river mile 55.0) has been verified for dissolved oxygen predictions. It is this upper one-half of the estuary that will be subjected to increases of wastewater loadings in the near future.

The models of the free-flowing Patuxent and the Patuxent Estuary can be run as one continuous model if it is necessary to evaluate the affect of an upstream loading over the entire basin. The models can also be used for coverage of critical areas only, by specifying upstream and downstream boundary conditions for the critical reach under examination.

STUDY AREA DESCRIPTION

The Patuxent River Basin, located entirely in the State of Maryland, has a drainage area of approximately 930 square miles. Its two major tributaries are the Little Patuxent River and Western Branch with drainage areas of 160 and 110 square miles, respectively. The tidal portion extends to Hardesty, Maryland, a distance of about 55 miles from the mouth of the river at Drum Point, river mile 0.0.

The headwaters of the free-flowing Patuxent are impounded above Laurel, Maryland in the Triadelphia and T. Howard Duckett Reservoirs. The impoundments provide for generally regulated flows in the mainstem of the Patuxent downstream to the confluence of the Little Patuxent with the mainstem. The Little Patuxent is not regulated by dams and exhibits flashy flow patterns following thunderstorm activity. Surging flows into the estuary during the summer are attributed mainly to the Little Patuxent. Total annual precipitation in the basin is estimated at 30 to 44 inches per year with the maximum precipitation occurring in July and August.

DATA ACQUISITION

For the purpose of obtaining data for model application, 52 water quality sampling stations were located in the Patuxent River Basin. Twenty-seven of these stations were located in the estuary between river mile 0.0 and 55.0. Fourteen stations were located in the free-flowing mainstem of the Patuxent between river mile 55.0 and river mile 81.0 at Laurel, Maryland downstream from Rocky Gorge Dam. Eleven sampling stations were established in the Little Patuxent from its confluence with the mainstem upstream to Savage, Maryland, river mile 18.0. (See Appendix A for Basin map and station descriptions).

Water quality surveys were carried out in the Basin during April 3-5, June 4-7, July 9-12 and October 9-12, 1973. The June and July intensive surveys encompassed the entire Basin. The

April and October surveys were confined to the estuary with the April survey designed to determine rough salinity gradients for determining estimates of the dispersion coefficients. The October survey measured surface and bottom dissolved oxygen concentrations for model verification. Data collected in the estuary were obtained during slack water conditions.

There are 5 temporary stream discharge gages located in the upper basin. The gages are located at the following sites:

(1) Little Patuxent River near Savage (Brock Bridge Road)
(River Mile 15.3)

(2) Little Patuxent River at State Route 424 Bridge
(River Mile 2.8)

(3) Patuxent River at Montpelier, Baltimore-Washington Parkway
(River Mile 75.0)

(4) Patuxent River at Pigeon House Corner
(River Mile 63.5)

(5) Patuxent River at John Hanson Highway (U.S. Route 50)
(River Mile 60.5)

The above gages are not maintained on a regular basis by the United States Geological Survey. Under a contract with U.S.G.S., current-meter discharge measurements were made at each site during the June and July studies and prior to the October survey. This enabled U.S.G.S. to furnish stream discharges for the gage heights read at the time of sampling.

In addition to the temporary gages, two permanent continuous recording gages, one at Rocky Gorge Dam (river mile 80.9) and the other at Largo, Maryland (river mile 11.1) on Western Branch, provided flow data for model usage. Stream discharges measured during the intensive surveys are set forth in Appendix B.

Flows recorded at Route 50 Bridge and Western Branch were used as freshwater inputs into the estuary. Since the gage for Western Branch is located a considerable distance upstream from the confluence with the Patuxent, a yield factor (cfs/sq. mi.) was computed to adjust the gage readings to represent flows at the confluence. Flows measured at Rocky Gorge Dam and at the mouth of the Little Patuxent River were inputs into the free-flowing Patuxent model. Flows recorded at Savage, Maryland, were used as starting flows for the Little Patuxent Model. Flows from each treatment plant were entered into the models at their respective river mile point of discharge.

Estuary data were collected during low slack water or high slack water stages. Time of occurrence of the tides allowed only high slack water runs on July 11-12 and only low slack water runs on October 12, 1973.

The parameters sampled and measured in the AFO laboratory during the June and July surveys were as follows: DO, BOD_5, TOC, TC, TKN, NH_3, NO_2+NO_3, Pi, TP and Chloro. a. Salinity, conductivity, temperature, and pH were routinely measured in the field. A complete set of the sampling data is set forth in Appendix D.

Special studies included long-term BOD at specified estuarine and stream stations for the purpose of attempting to measure instream carbonaceous and nitrogenous demand rates. Methyl blue, an inhibitant to the bacterial oxidation of organic nitrogen and ammonia, was injected into duplicate samples for determining the second stage oxygen demand (nitrogenous BOD).

Twenty-four hour composite samples of wastewater treatment plant effluents were obtained from the major plants in the basin during the June and July surveys. Composite treatment plant data were also available from a survey by the Annapolis Field Office during October, 1972. Although there are an estimated 60 wastewater discharges in the basin, the 9 plants listed below provide the bulk of the wastewater.

Western Branch
Bowie-Belair
Laurel Park
Maryland City
Patuxent
Fort Meade Nos. 1 & 2
Md. House of Correction
Savage

During the July 10-11 24-hour composite sampling period these plants discharged a total 24.9 million gallons of effluent to the Patuxent system. The nature of the effluent from individual plants is shown in Appendix C.

MODEL APPLICATION

Two models from the CMS (Comprehensive Modelling System), a system of mathematical models developed by Crim and Lovelace, were applied to the Patuxent River System. The two models used were AUT0SS and AUT0QD.

Both AUT0SS and AUT0QD are composed of a hydraulic component that computes the streamflow profile and a water quality component that computes a concentration profile of instream constituents. The models are one-dimensional, single-channelled models that use first order kinetics to represent instream biological-chemical processes. AUT0SS is a steady-state model while AUT0QD is a quasi-dynamic model, representing flow patterns as step shaped patterns in time and water quality concentrations as continuous patterns.

When AUT0SS and AUT0QD were applied to the Patuxent Estuary, dispersion coefficients were emperically determined to represent tidal mixing. The dispersion coefficients used in the models are discussed under the section of this report dealing with model calibration and verification for the Patuxent Estuary.

The AUT0-QUAL models have been modified to receive non-point sources of substances and flow. When quantified, the oxygen content and the carbonaceous and nitrogenous BOD loadings of any given non-point source can be entered into the stream or estuary. Partial use of this modification was made in the calibration of the model for the

Little Patuxent River.

Complete documentation of and operation instructions for AUT0SS and AUT0QD are set forth in EPA Technical Report 54, AUT0-QUAL MODELLING SYSTEM, authored by Robert L. Crim and Norman L. Lovelace. Report 54 and documentation of the non-point source modification are available from the Annapolis Field Office, Region III or the Monitoring and Data Support Division, EPA, Washington, D. C.

MODEL CALIBRATION AND VERIFICATION

It is critical that model calibration and verification be understood and carried out when applying models to real world situations.

The model calibration process consists of matching a predicted profile, such as dissolved oxygen, to an observed profile by means of adjusting the calibration constants. Coefficients for dispersion (E), CBOD decay rates (K_c), NBOD decay rates (K_n) and reaeration rates (K_2) are adjusted to match the DO model profile with the observed profile.

Some differences in magnitude between model results and the actual data can be expected, but the general shape of the two curves should always correspond.

A variety of hydrologic conditions should be run for verification utilizing the coefficients derived from the calibration process. High, medium and low flow conditions will show the ability of the model to correctly respond to real world situations.

Too many instances of using a model calibrated to a specified flow condition to predict stream reactions at extreme flows without field data to confirm the predictions have occurred. The validity of planning decisions on this basis remains in question.

PATUXENT MAINSTEM CALIBRATION AND VERIFICATION

Data on the free-flowing portion (for the period July 15-19, 1968) are available from a cooperative study with the Maryland Department of Water Resources. Both the 1968 and the current data show the mainstem to contain high concentrations of nitrogen. These high nitrogen concentrations are attributed to wastewater treatment plant discharges of excessive amounts of TKN and NH_3 forms of nitrogen.

AUT0SS was calibrated to simulate DO conditions in the mainstem for the periods July 15-19, 1968 and June 4-7, 1973. Carbonaceous (CBOD) and nitrogenous (NBOD) loadings from the treatment plants were entered into the model at specified river miles. These loadings were calculated from the commonly used literature values where ultimate CBOD = 1.45 BOD_5 and ultimate NBOD = 4.57 TKN. Relatively steady-state low flow conditions occurred during July 1968 and medium flow conditions occurred during June 1973. The out-flow at the downstream junction of the model was 120.1 cubic feet per second (cfs) and 413.4 cfs, respectively. Stream velocities used in model calibration were obtained from 1966-1968 studies by the Annapolis Field Office of time-of-travel and from depth measurements made during the 1973 studies.

The model was calibrated by testing various carbonaceous and nitrogenous BOD decay rates. Figures 1 and 2 show the results of calibration using CBOD decay rates (1/day base e) of 0.6, 0.6, 0.4, and 0.4 at river miles 58.0, 64.0, 68.0 and 75.0, respectively, and NBOD decay rates (1/day base e) of 0.3, 0.4, 0.7, 0.7, 0.4 and 0.2 at river miles 60.0, 66.0, 69.0, 71.0, 73.0 and 75.0, respectively. A concentration of 0.0 mg/l DO was assumed for the plant effluents. Observed DO, CBOD and NBOD values were entered at river mile 81.0, below Rocky Gorge Dam, and mile 63.8 where the Little Patuxent joins the mainstem.

During the week of July 9-12, 1973, an average net flow of 164.2 cfs was recorded in the mainstem of the Patuxent. The calibrated coefficients obtained from the July 1968 and June 1973 model runs were used in the model verification runs. Treatment plant discharge values for carbonaceous and nitrogenous oxygen demand loadings used in the model reflected the results of the composite sampling of July 10-11, 1973. Observed DO values were assigned to major inflows while a DO of 0.0 mg/l was fixed for treatment plant effluents. The model verification curve for this flow period is shown in Figure 3.

LITTLE PATUXENT CALIBRATION AND VERIFICATION

AUT0QD was utilized in the calibration and verification of the Little Patuxent. Actual flows for each day for the period June 4-7, 1973 recorded at Savage, Maryland, and daily concentrations of DO, carbonaceous BOD, and nitrogenous BOD were entered into the model at starting river mile 18.0 and at the river mile locations of the wastewater treatment plants. Figure 4 shows the results of calibration using a CBOD decay rate (1/day base e) of 0.4 for the entire length of the Little Patuxent River under study (mile 0.0 to 18.0) and NBOD decay rates (1/day base e) of 0.4, 0.6, 0.6, and 0.2 at river miles 0.0, 1.0, 11.0, and 15.5.

Flow increments attributable to small feeder stream and non-point sources of runoff were noted between the stream gages at river miles 15.5 and 2.8. Lovelace's non-point source program was applied to account for these flow increases. Based on the flow differences between the two gages for each day during the period June 4-7, 1973, daily oxygen loadings (lbs/day) were calculated and entered into the model for even distribution between river miles 4.0 and 15.0. It was assumed that a minimum of 4.0 mg/1 DO would be found in surface runoff and in small feeder streams. Corresponding loadings for CBOD and NBOD were not quantified. While estimates of 2.0 - 3.0 ppm BOD_5 from urban runoff were cited in older reports on the Patuxent Basin, much model testing of these estimates against stream quality conditions under varying stream flow and surface runoff would be needed.

AUTØQD verification runs were made using the calibration coefficients determined from the June 4-7, 1973 data to match field data profiles for the period July 9-12, 1973. Daily concentrations of DO, NBOD and CBOD were input into the model at starting mile 18.0 along with the daily pounds of DO from non-point sources at selected daily flows for the period July 9-12, 1973. Figures 5-8 show AUTØQD model verification and daily flows for the period July 9-12, 1973.

PATUXENT ESTUARY CALIBRATION AND VERIFICATION

Slack water runs were made during April 3-5, 1973, to get a feel for salinity gradients in the estuary and for rough calibration of dispersion coefficients. From June 4-7, 1973, a series of low and high slack water runs were carried out in the estuary. Temperature, salinity and conductivity were measured at various depths, usually at surface, 25 feet and 40 feet at stations below Benedict Bridge and at surface, 10 feet and 20 feet at stations above the bridge. Cross-sectional averages were calculated, based on the depth measurements and cross-sections.

Seaward boundary conditions (river mile 0.0) were fixed from the salinity data and daily freshwater flows entered into the model at the fall line (river mile 55.0) and at the mouth of Western Branch (river mile 45.0).

AUT0QD was run and calibrated for the period June 4-7, 1973. The results of the June 7 calibration run are shown in Figure 9. The dispersion coefficients used in the model to represent tidal mixing were as follows:

River Mile	Dispersion Coefficient (SQFT/SEC)
0.50	7,750
1.50	7,250
2.50	6,750
3.50	6,250
4.50	5,750
5.50	5,250
6.50	4,750
7.50	4,250
8.50	3,750
9.50	3,520
10.50	2,730
11.50	2,190
12.50	1,650
13.50	1,110
14.50	570
15.50 - 54.50	300

The above dispersion coefficients were used in model verification to reproduce salinity profiles of the estuary based on the field data collected during slack water conditions covering the period July 9-12, 1973. The daily predictions of AUTØQD covering this period and the freshwater flows used in the model are presented in Figures 10-13.

Efforts were concentrated in the critical reach of the estuary -- river mile 22.2, Benedict Bridge, to river mile 55.0, Hardesty, Maryland -- for the purpose of calibrating and verifying a model to predict dissolved oxygen concentrations. Surface samples of dissolved oxygen were collected during the June 4-7 and July 9-12, 1973 surveys. It was found that the surface samples showed extreme fluctuations in dissolved oxygen from day-to-day and station-to-station, possibly attributable to wave action and wind interference and photosynthesis. A survey was carried out from October 9-12, 1973, at which time both surface and bottom samples were used as the initial conditions for model verification.

AUTØQD was calibrated to match observed DO concentrations in the upper one-half of the estuary for the June 4-7, 1973 and July 9-12, 1973. Daily carbonaceous and nitrogenous loadings from the free-flowing Patuxent River and from Western Branch, together with the daily stream flows, were entered into the model at river miles 55.0 and 45.0, respectively. The DO calibration curves for the last day of the two study periods are set forth in Figures 14 and 15. In the application of all the models average temperatures for the study periods were specified.

The calibration constants used in the model were as follows: CBOD decay rates (1/day base e) of 0.5 (mile 55.0), 0.4 (mile 45.0), 0.05 (mile 40.0); NBOD decay rates (1/day base e) of 0.3 (mile 55.0), 0.6 (mile 45.0), 0.05 (mile 44.0), 0.02 (mile 40.0), 0.02 (mile 33.0), 0.20 (mile 22.0); photosynthesis rates (gr. $0_2/m^2$/day), 0.0 (mile 46.0), 2.5 (mile 45.0), 2.5 (mile 38.0), 2.0 (mile 37.0), 2.0 (mile 22.0); and the rates for oxygen uptake of sediments (gr. $0_2/m^2$/day) of 1.1 (mile 45.8), 1.2 (mile 43.5), 2.5 (mile 38.1), 3.2 (mile 33.0), 3.1 (mile 22.2).

The photosynthesis rates were estimated from observed chlorophyll a data. The benthic demand rates were field measured during the week of August 20, 1973, by biologists from the EPA, National Field Investigations Center, Cincinnatti, Ohio. The stations measured -- Bristol Landing, Jug Bay, Nottingham, Lower Marlboro, and Benedict Bridge -- correspond to the rates and river miles mentioned above.

AUT0QD verification runs were made using the above calibration coefficients and the field data and flows measured for the period October 9-12, 1973. Figures 16-19 show AUT0QD model verification and daily flows for the October 9-12, 1973 period.

DISCUSSION

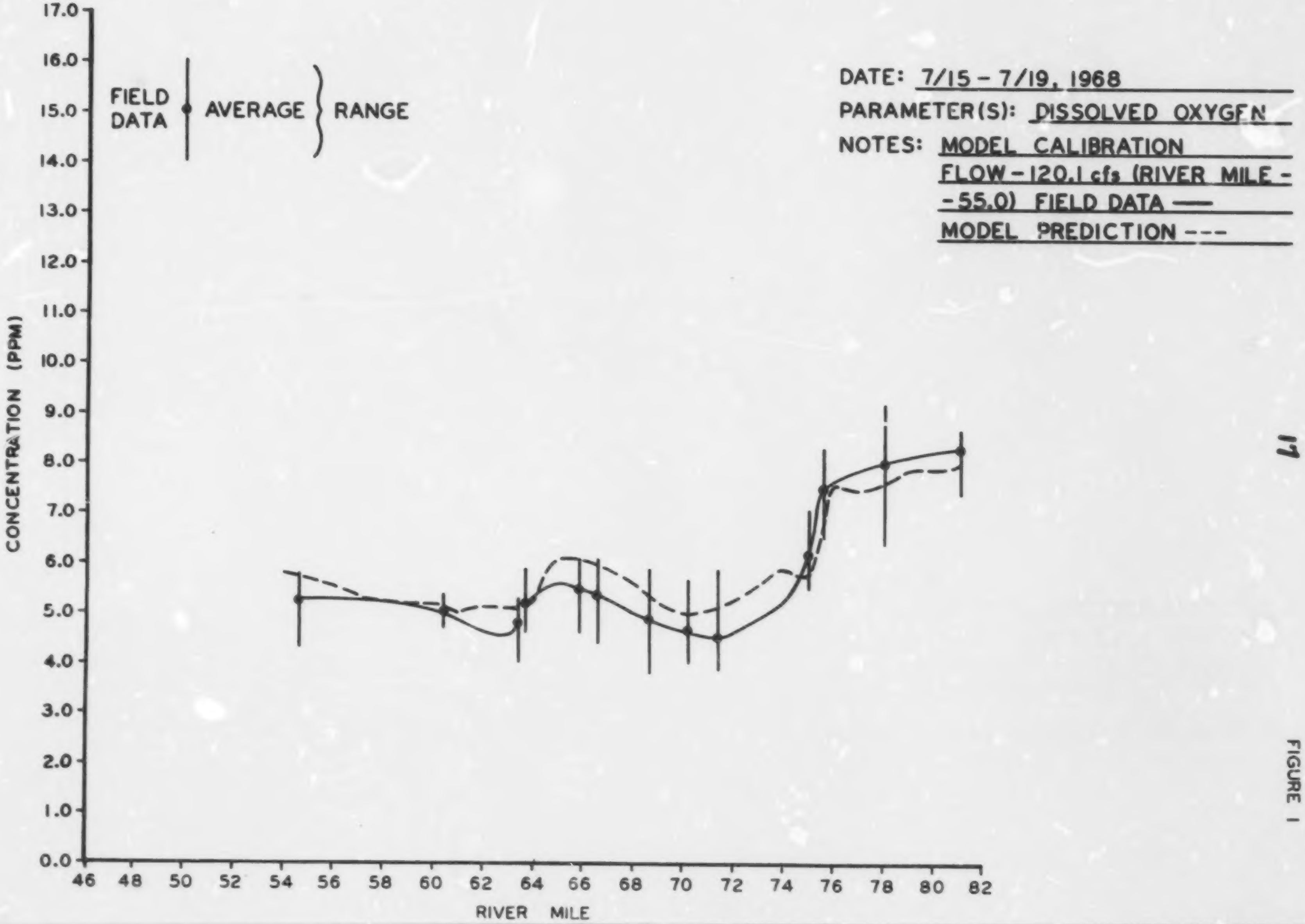
The AUT0-QUAL Models discussed in this report were given to staff members of the Maryland Environmental Service as part of the technical assistance function of EPA provided by PL 92-500. The models will provide an additional technical tool to the State of Maryland in its development of Section 303(e) Basin Plans for the Patuxent River.

The State of Maryland intends to adopt a policy on effluent standards for municipal wastewater discharges into surface waters in the Patuxent River Basin. This policy will require that all new treatment plants of any capacity to 1.0 mgd or more be designed for high degrees of removal of nitrogen, suspended solids and BOD_5. All existing plants over 1.0 mgd will be required by the State to meet the stringent effluent standards by July 1, 1978.

It is believed that EPA could assist Maryland in the identification and quantification of non-point sources of pollution in the Patuxent River Basin. This assistance should include a mass balancing of nutrient loadings in the free-flowing mainstem of the Patuxent River and the Little Patuxent River to account for and distinguish between point and non-point loadings of nutrients at specific river mile locations. The fate of the nutrients, including deposition and chemical change, should be described in terms of their role in the biological balance of the stream and the estuary.

FIGURE 1

PATUXENT RIVER - FREE FLOWING SECTION



PATUXENT RIVER - FREE FLOWING SECTION

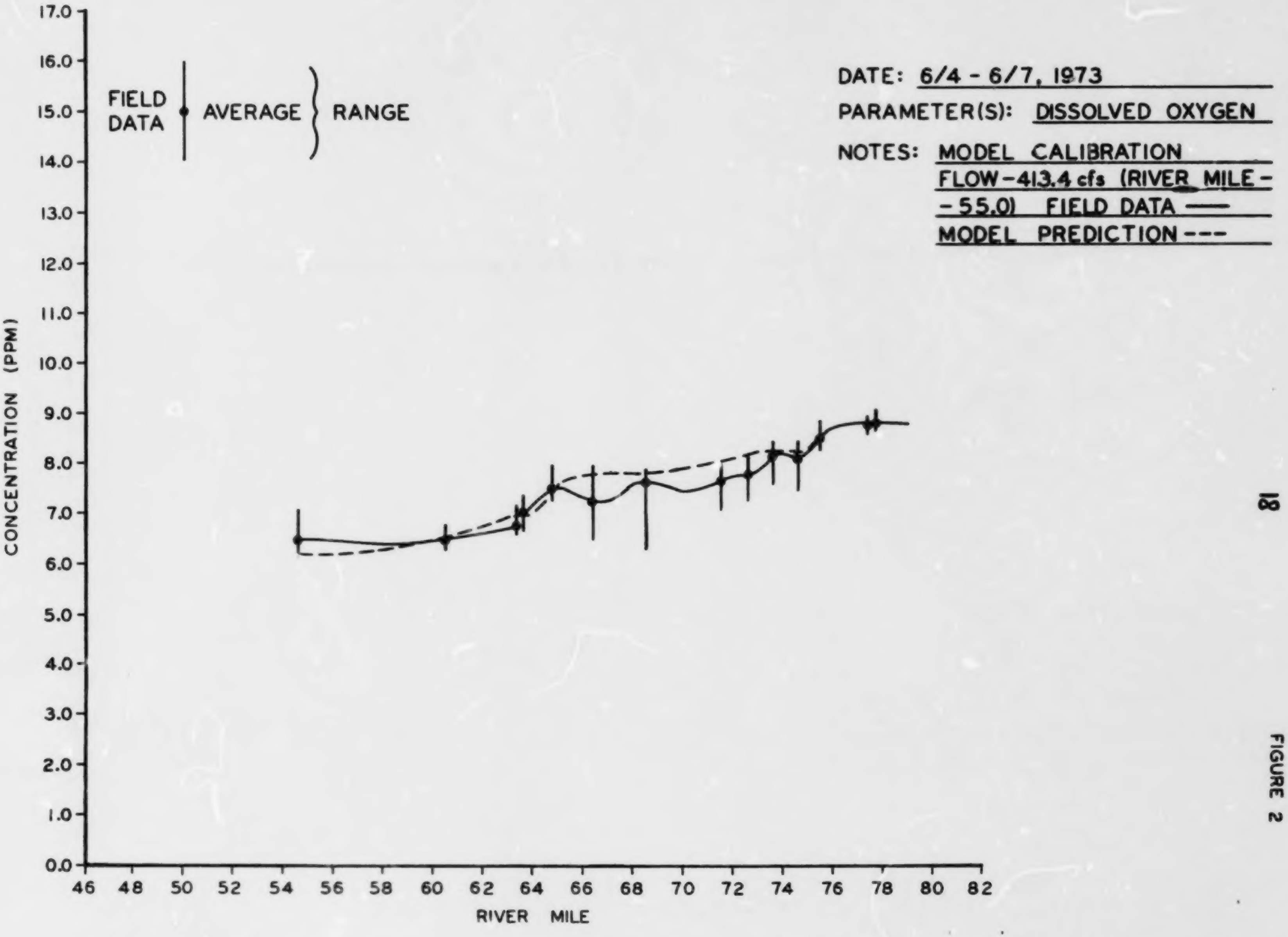
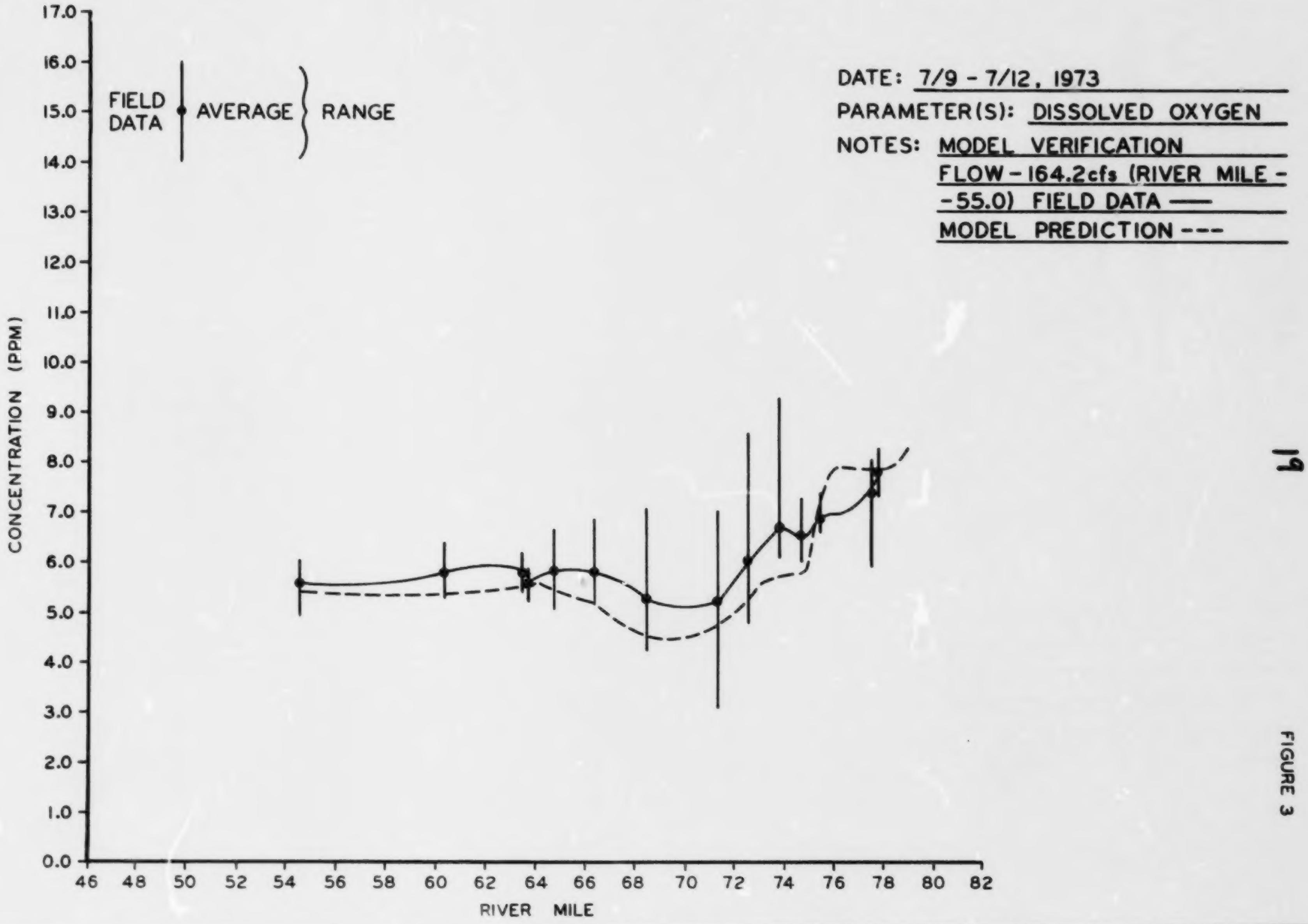


FIGURE 2

PATUXENT RIVER - FREE FLOWING SECTION



DATE: 7/9 - 7/12, 1973

PARAMETER(S): DISSOLVED OXYGEN

NOTES: MODEL VERIFICATION
FLOW - 164.2cfs (RIVER MILE -
-55.0) FIELD DATA ——
MODEL PREDICTION ---

FIGURE 3

LITTLE PATUXENT RIVER - FREE FLOWING SECTION

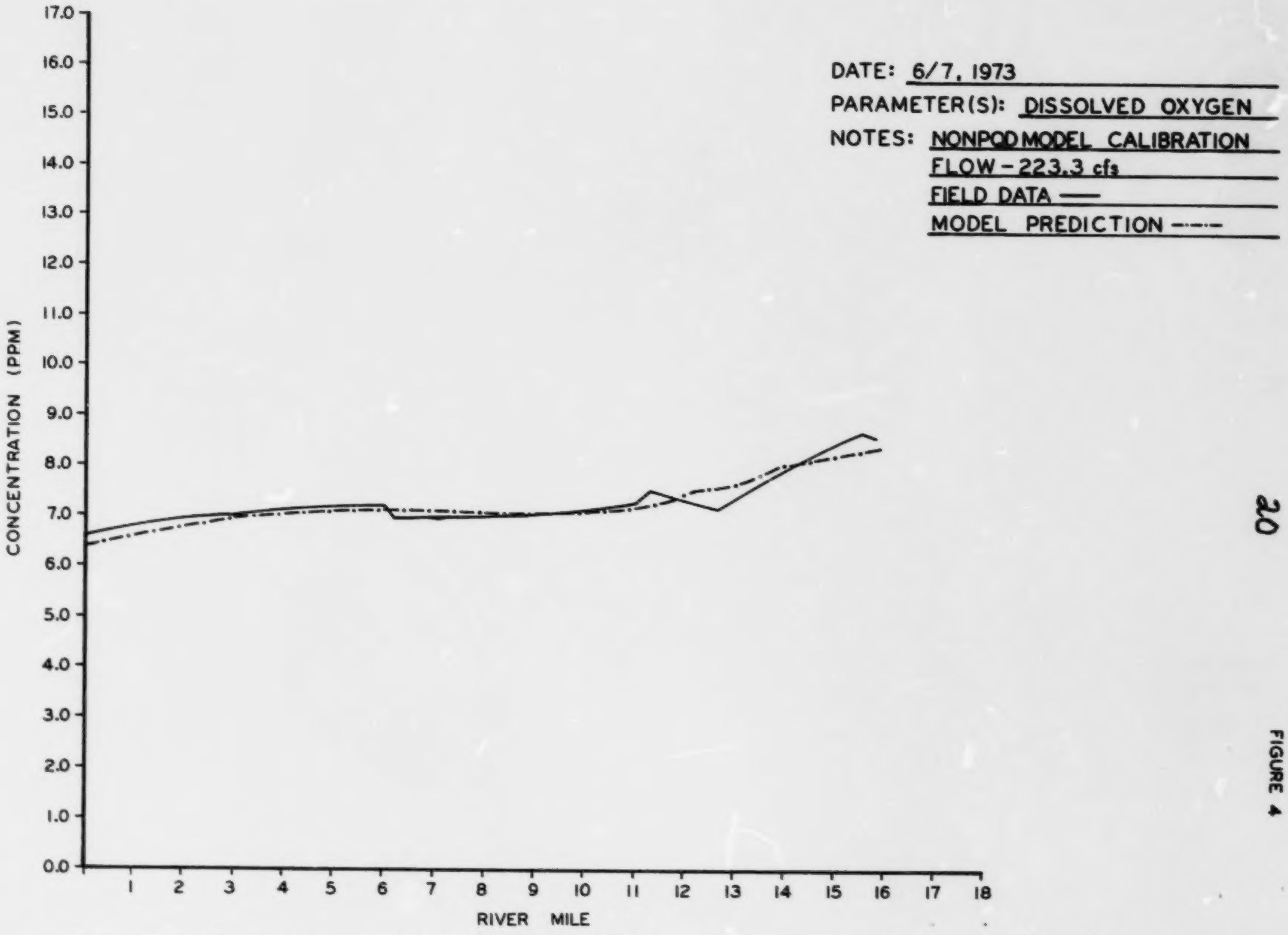
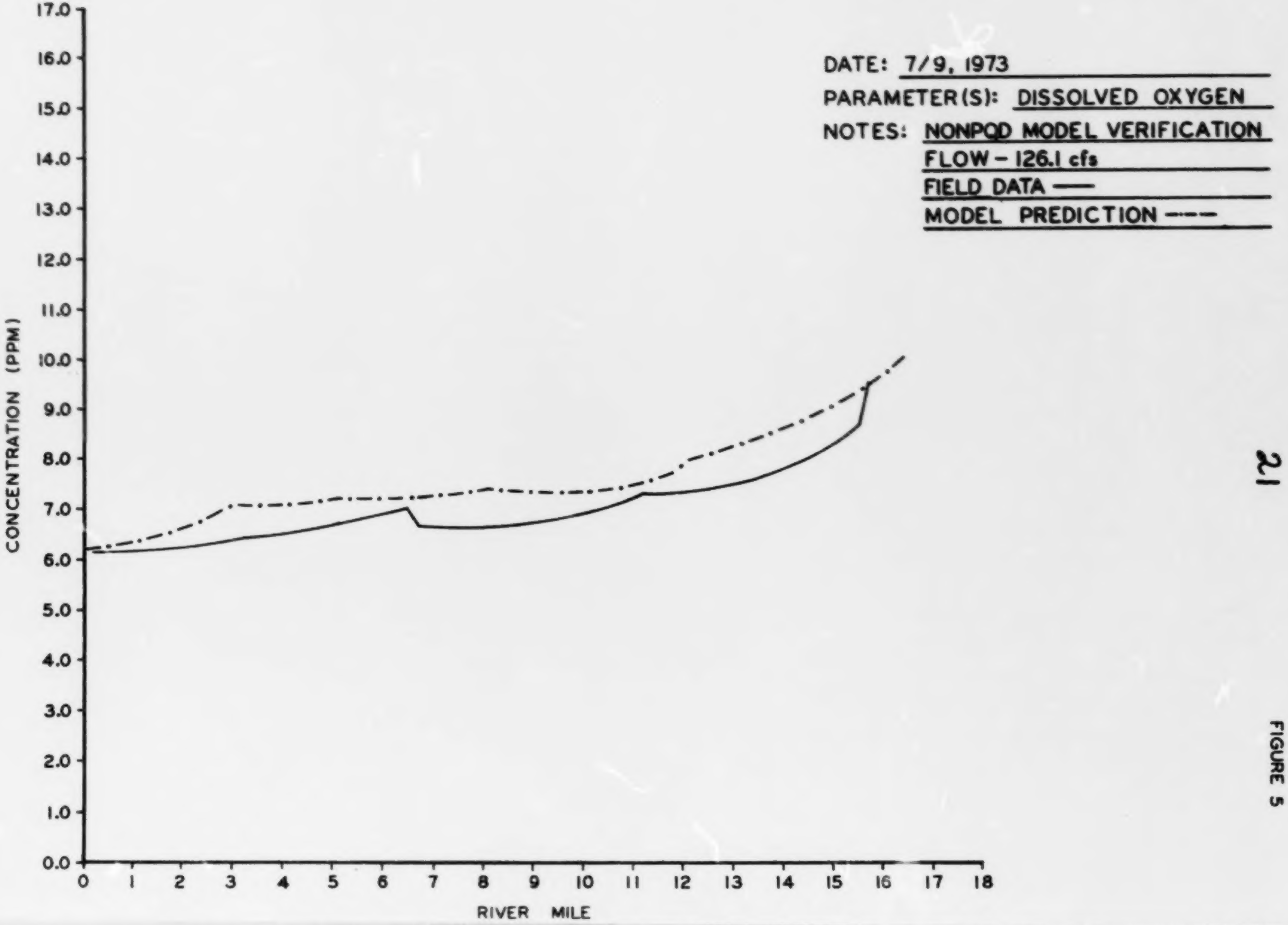


FIGURE 4

FIGURE 5

LITTLE PATUXENT RIVER - FREE FLOWING SECTION



DATE: 7/9, 1973

PARAMETER(S): DISSOLVED OXYGEN

NOTES: NONPOD MODEL VERIFICATION

FLOW - 126.1 cfs

FIELD DATA ——

MODEL PREDICTION -·-·-

LITTLE PATUXENT RIVER - FREE FLOWING SECTION

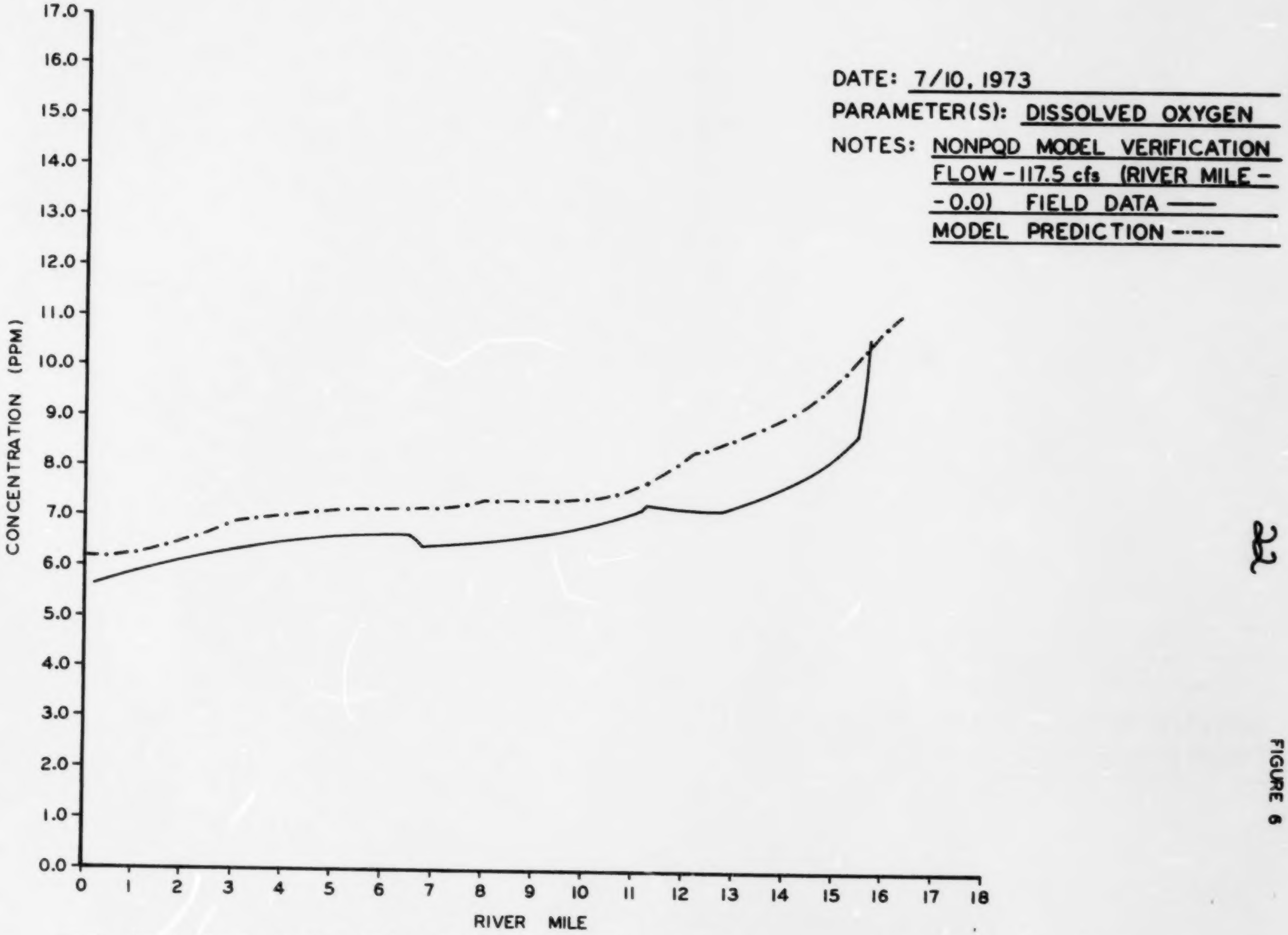
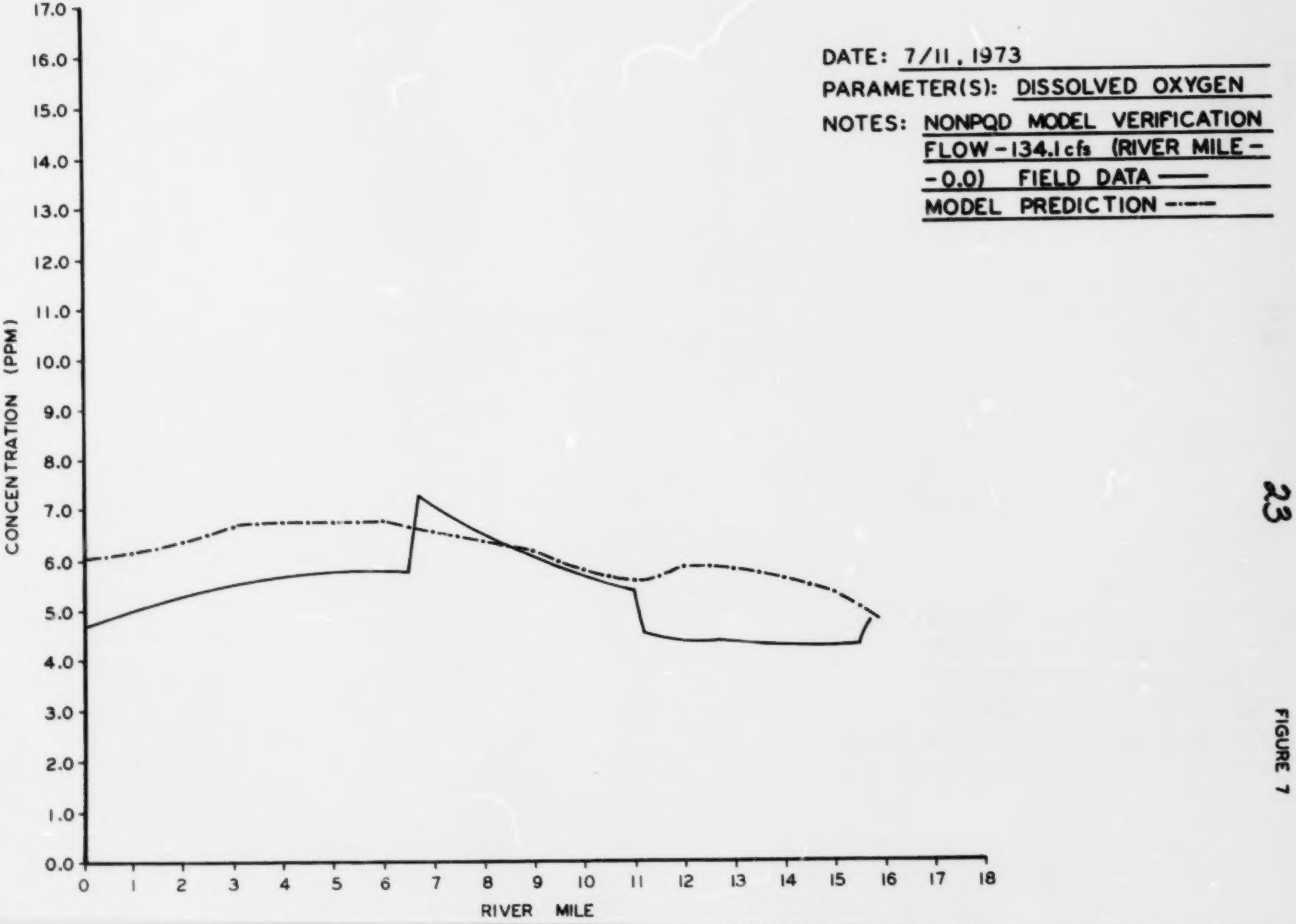


FIGURE 6

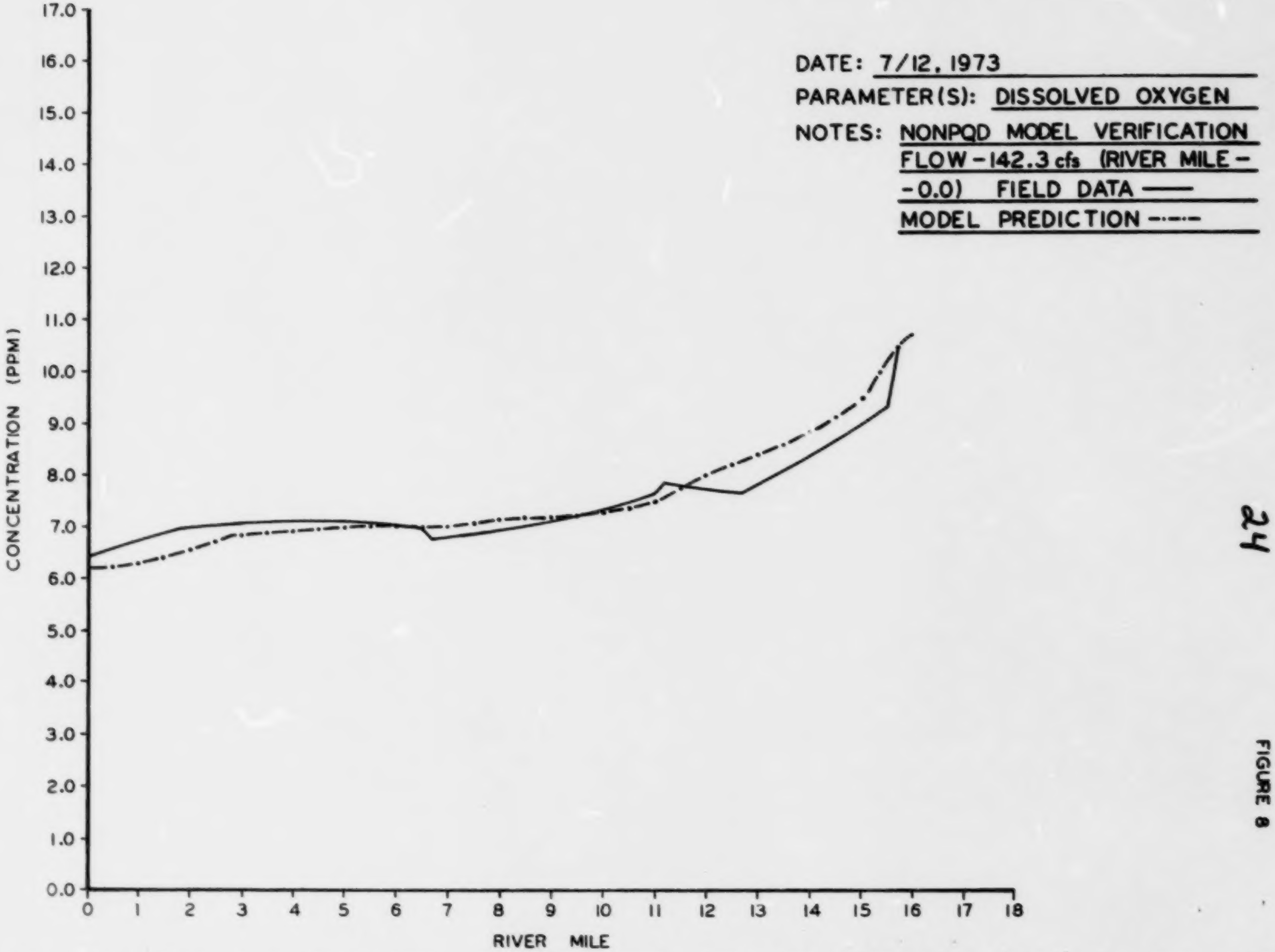
LITTLE PATUXENT RIVER - FREE FLOWING SECTION



DATE: 7/11, 1973
PARAMETER(S): DISSOLVED OXYGEN
NOTES: NONPQD MODEL VERIFICATION
FLOW - 134.1 cfs (RIVER MILE -
- 0.0) FIELD DATA ——
MODEL PREDICTION -·-·-

FIGURE 7

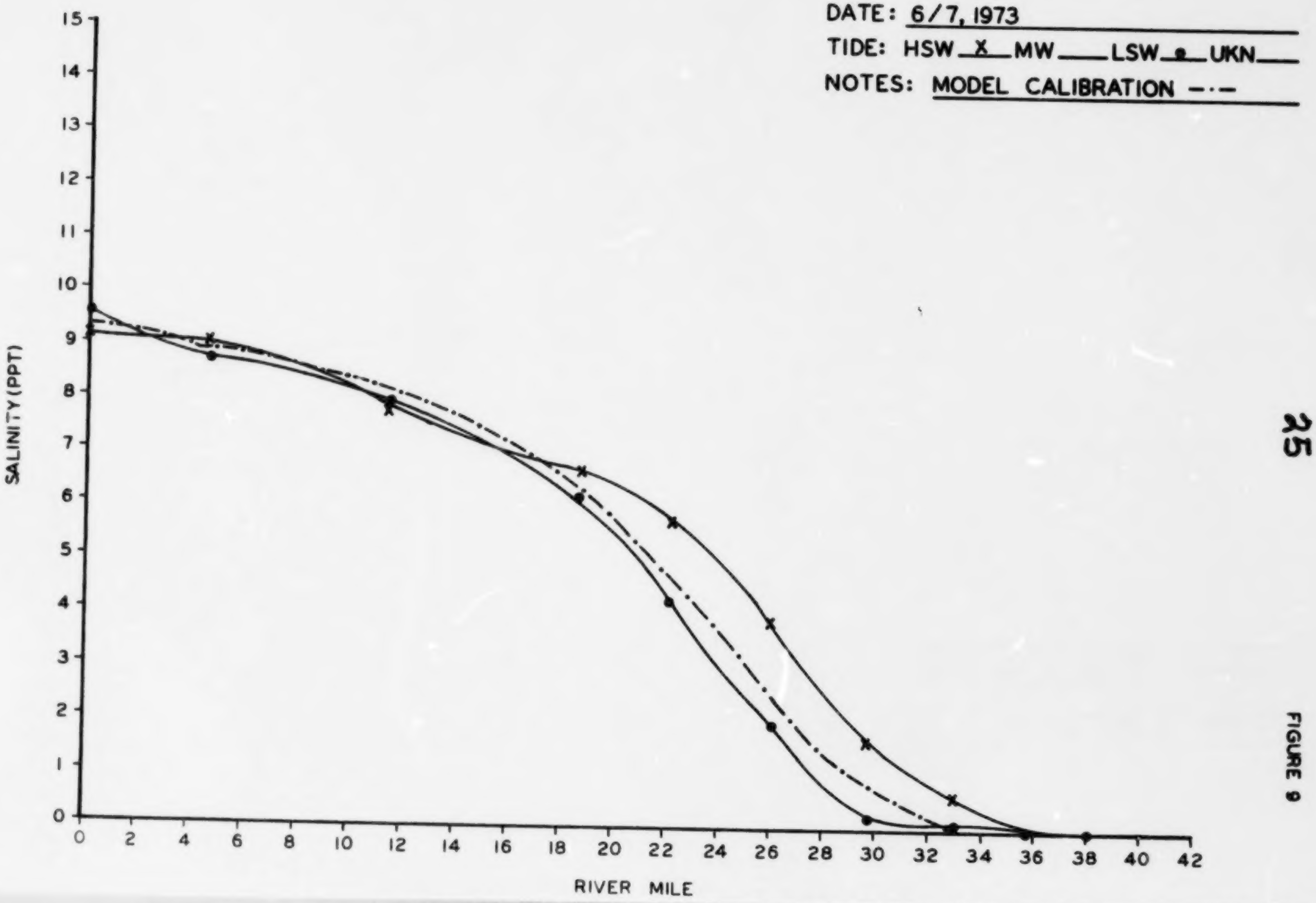
LITTLE PATUXENT RIVER - FREE FLOWING SECTION



24

FIGURE 8

PATUXENT ESTUARY – SALINITY PROFILES



DATE: 6/7, 1973

TIDE: HSW X MW ___ LSW ● UKN ___

NOTES: MODEL CALIBRATION –·–

FIGURE 9

PATUXENT ESTUARY – SALINITY PROFILES

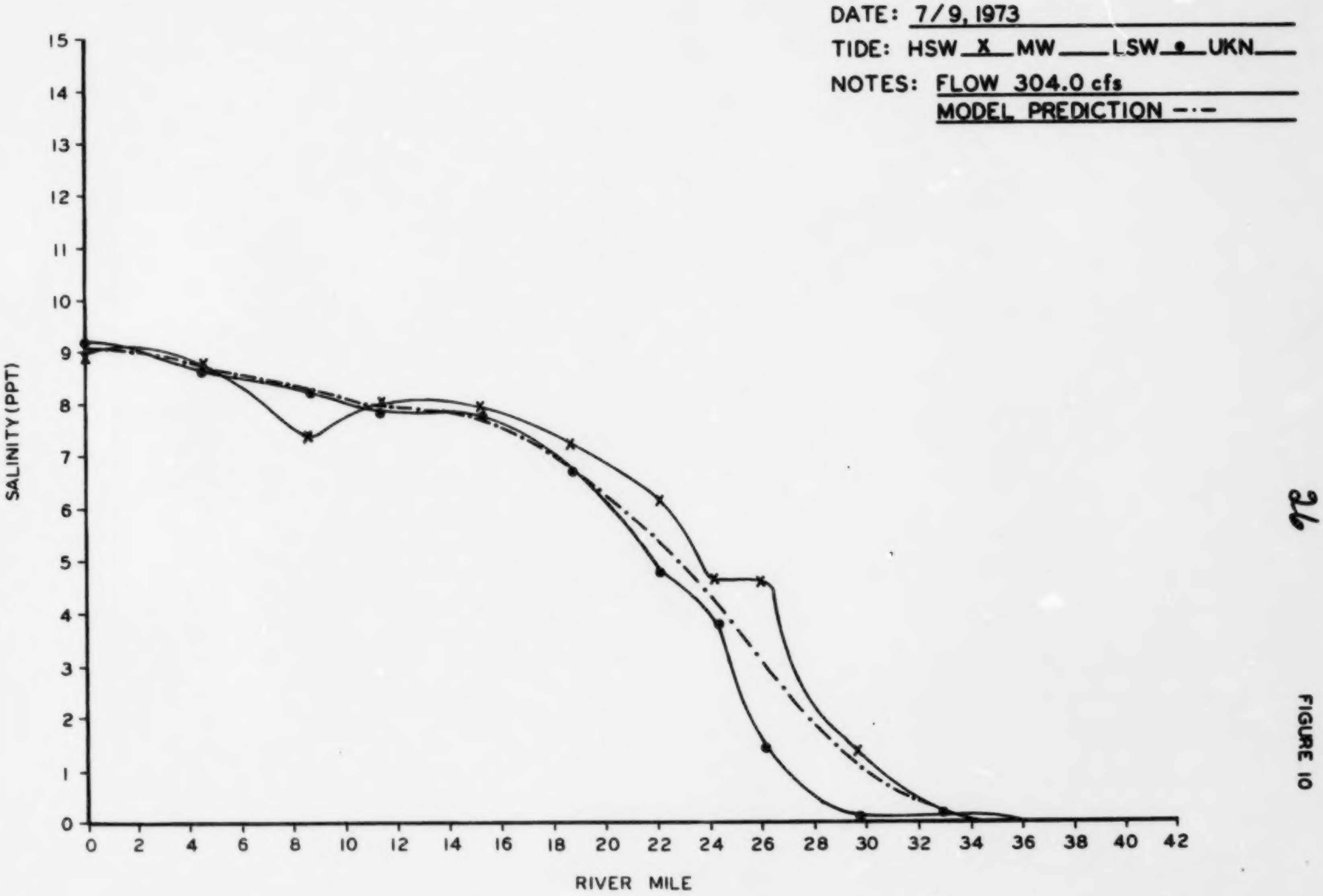


FIGURE 10

PATUXENT ESTUARY - SALINITY PROFILES

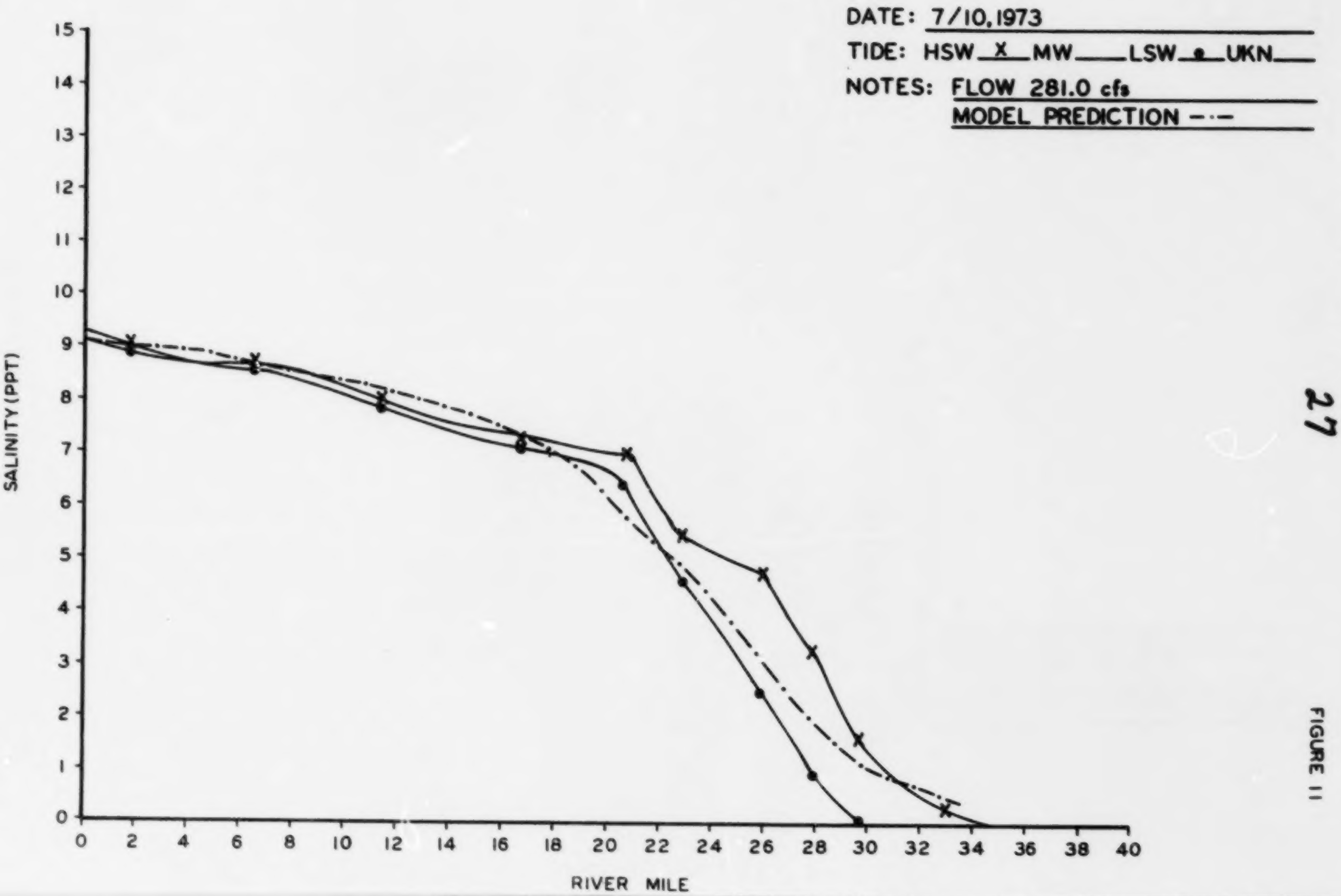
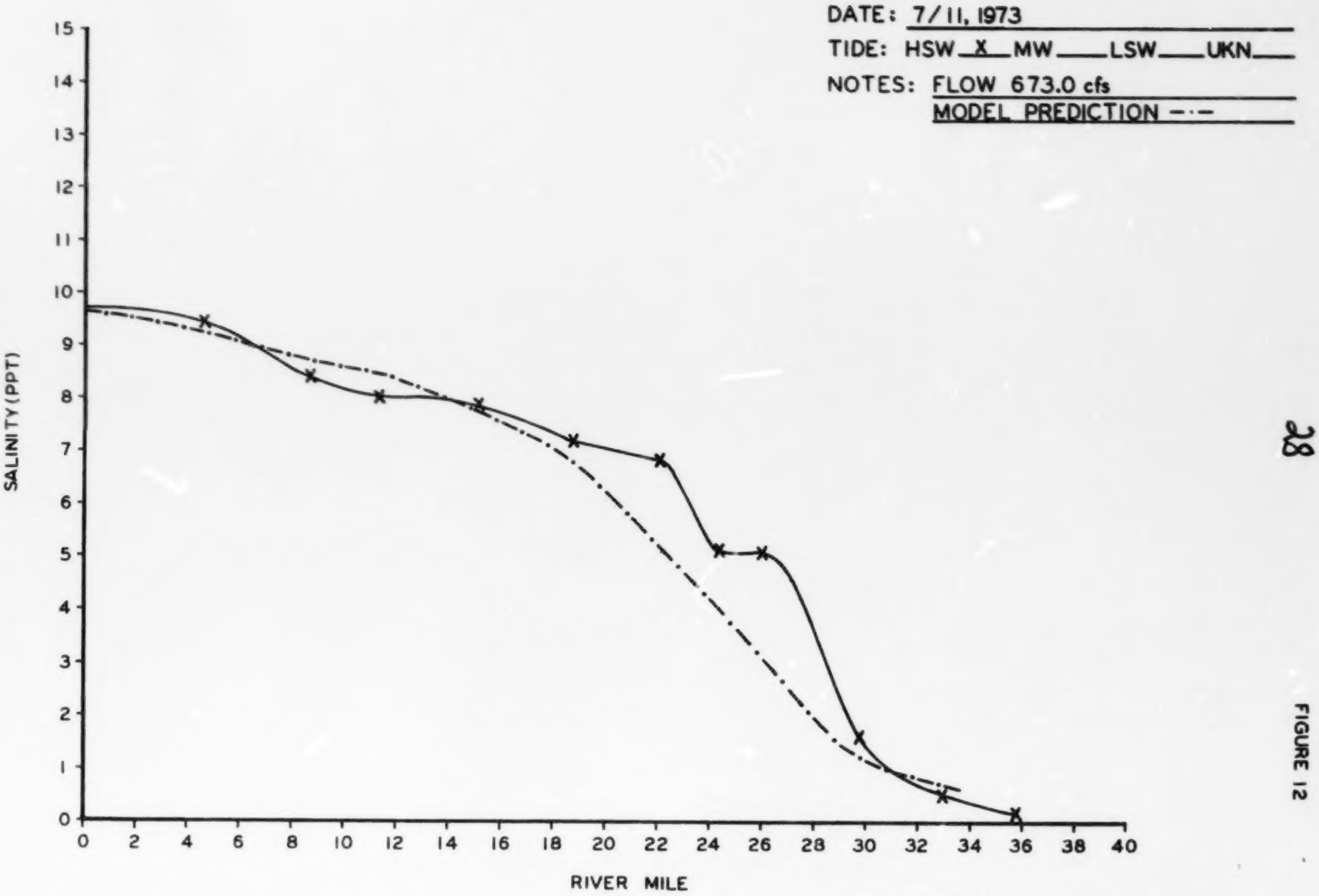


FIGURE 11

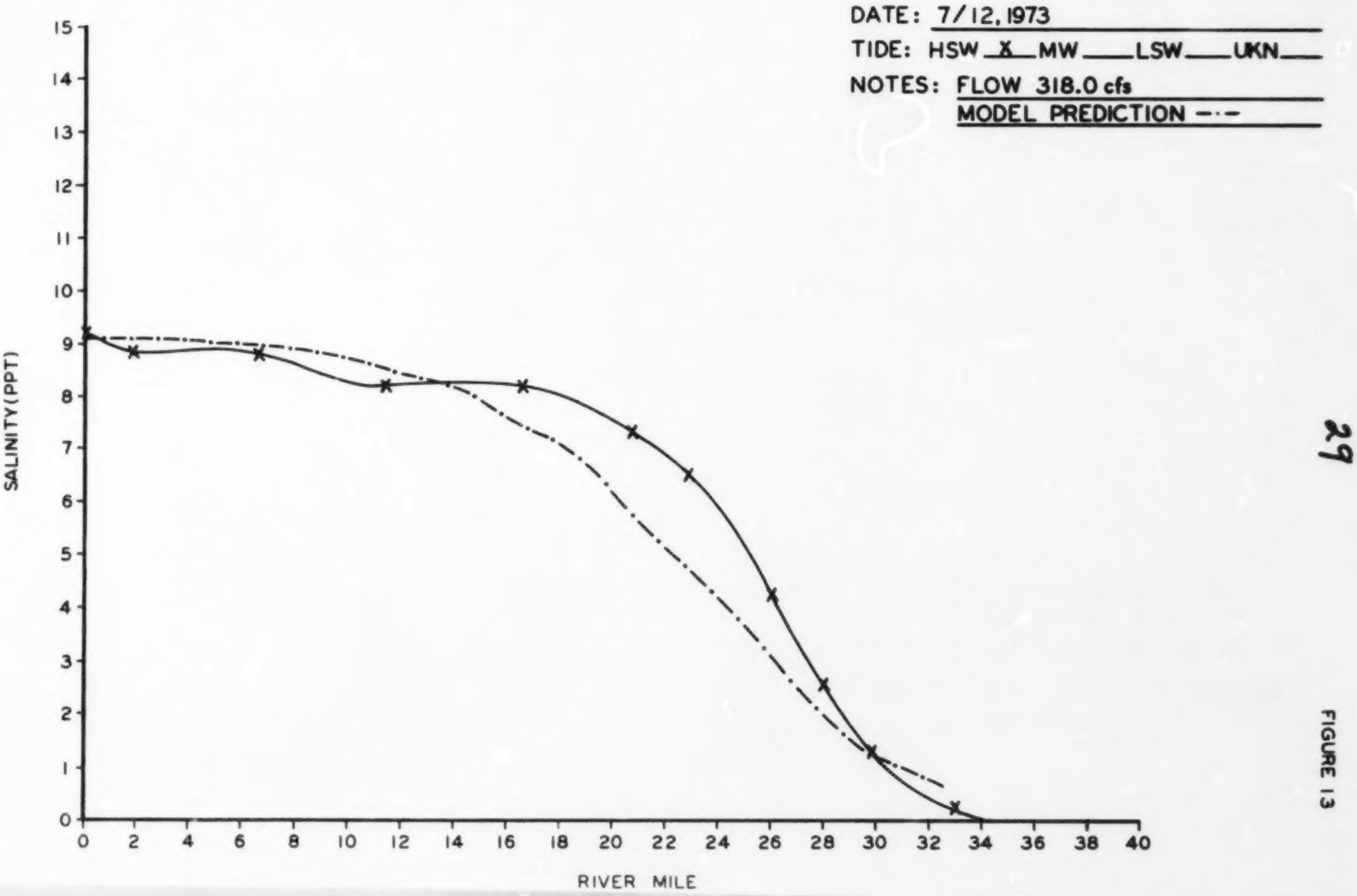
PATUXENT ESTUARY - SALINITY PROFILES



28

FIGURE 12

PATUXENT ESTUARY — SALINITY PROFILES



DATE: 7/12, 1973
TIDE: HSW X MW ___ LSW ___ UKN ___
NOTES: FLOW 318.0 cfs
MODEL PREDICTION —·—

FIGURE 13

PATUXENT RIVER ESTUARY

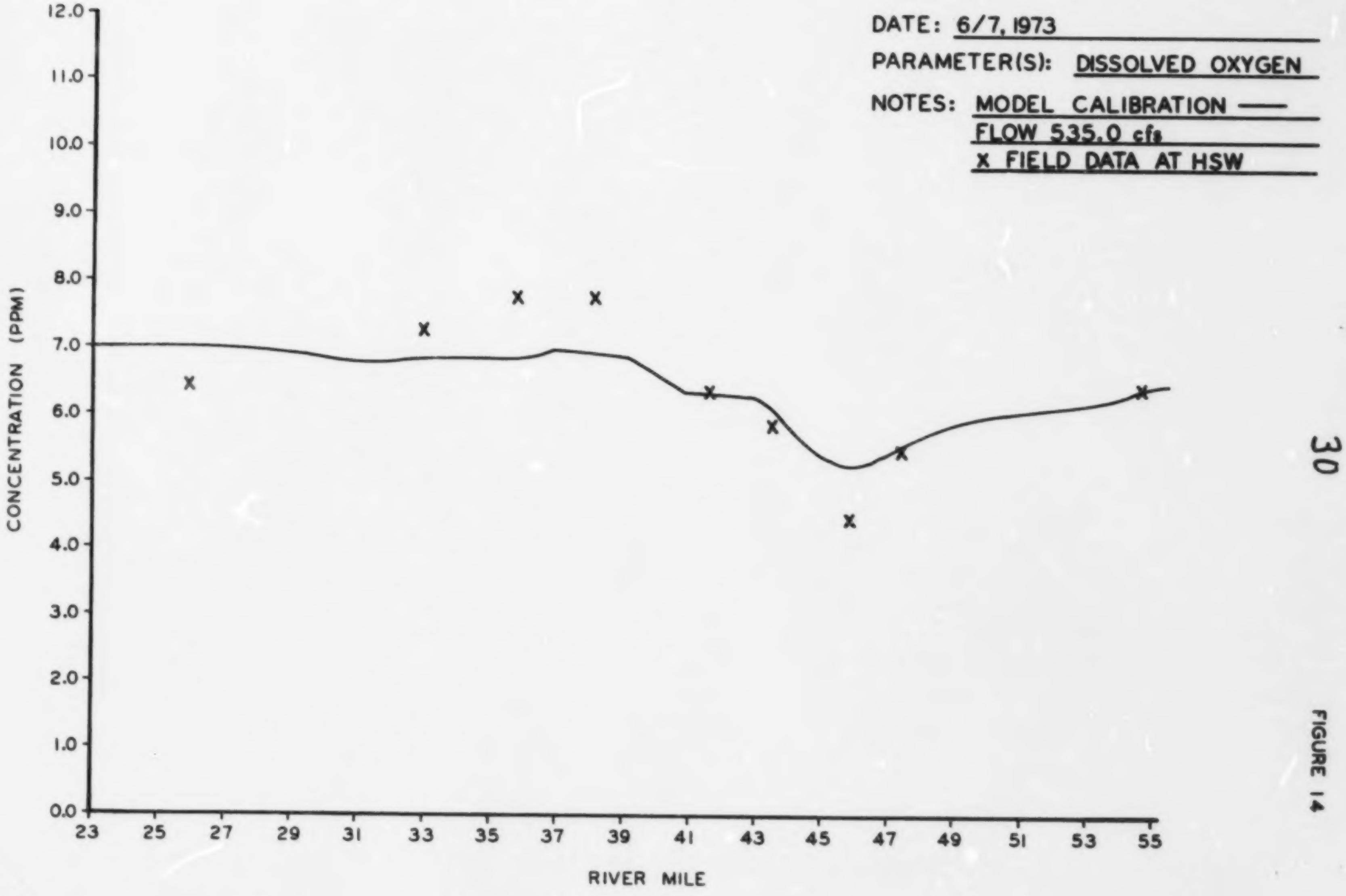


FIGURE 14

PATUXENT RIVER ESTUARY

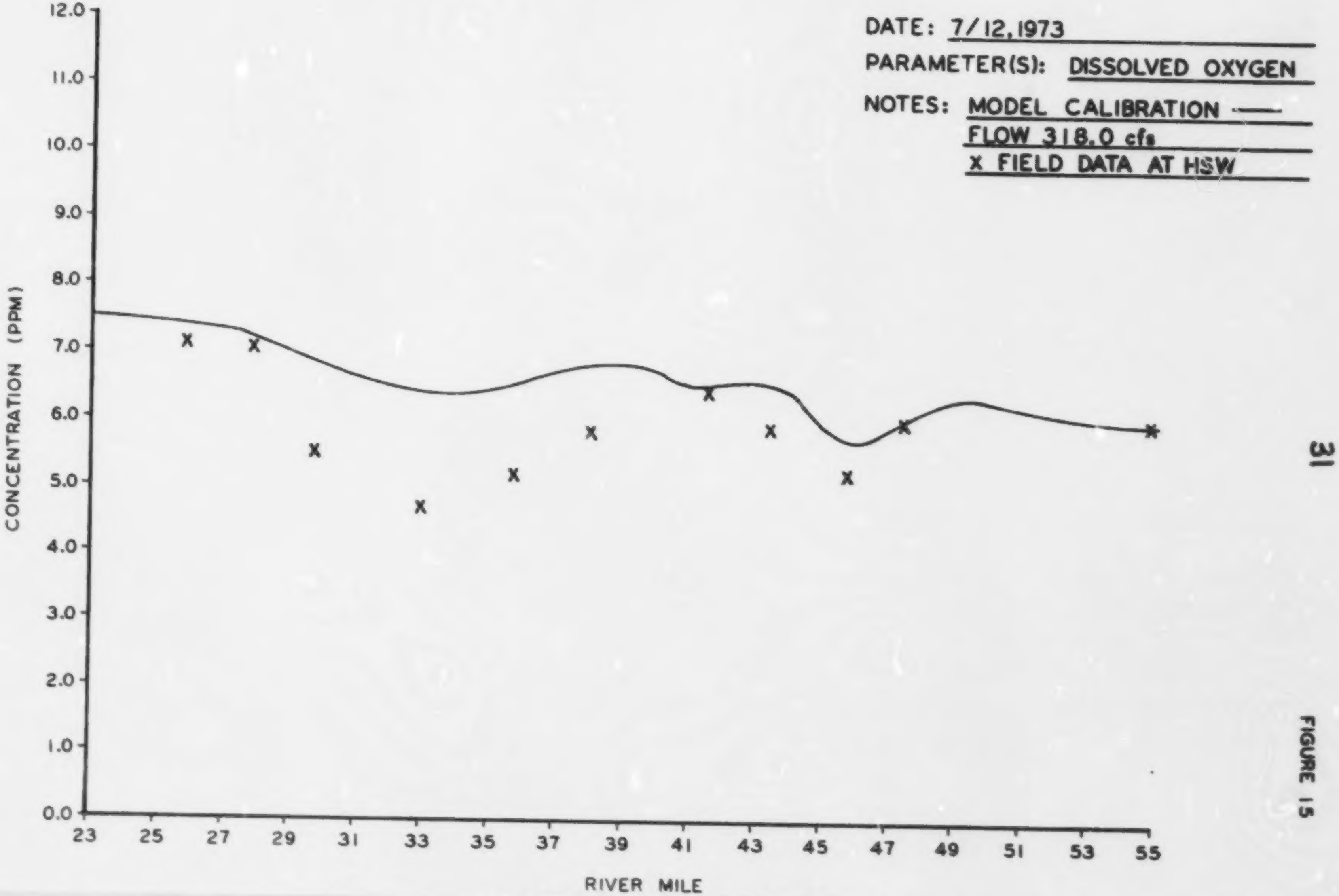


FIGURE 15

PATUXENT RIVER ESTUARY

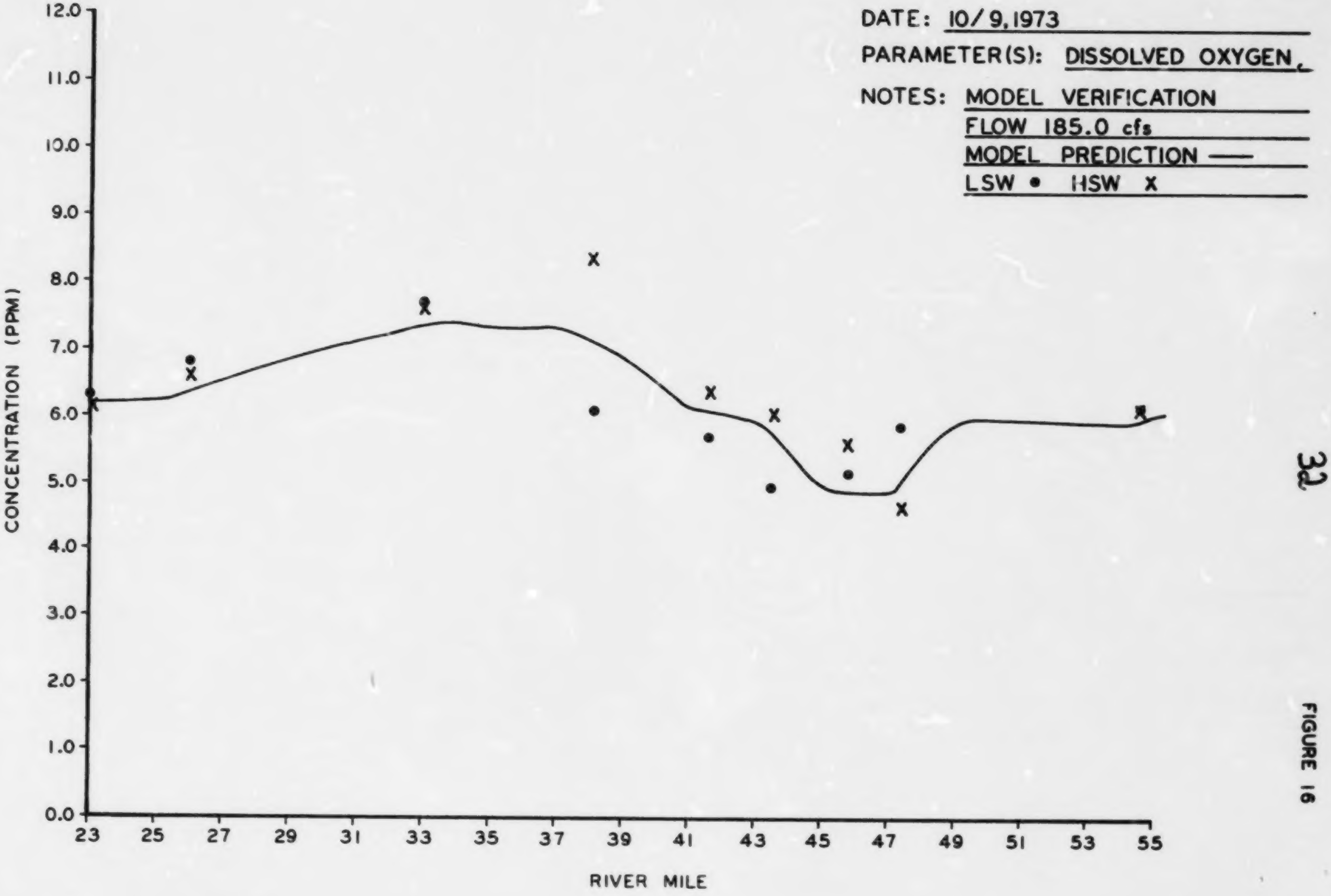
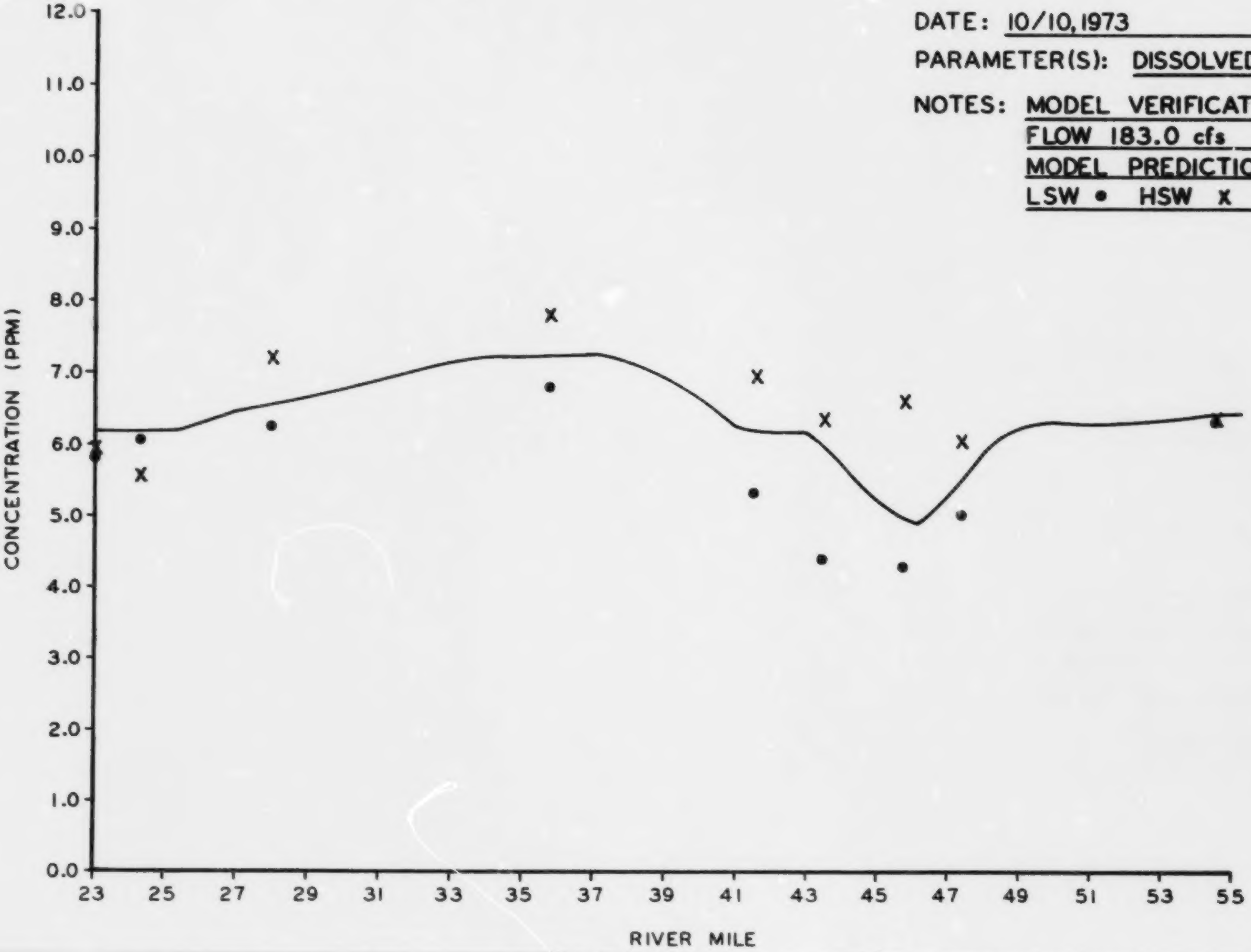


FIGURE 16

PATUXENT RIVER ESTUARY



DATE: 10/10,1973

PARAMETER(S): DISSOLVED OXYGEN

NOTES: MODEL VERIFICATION
FLOW 183.0 cfs
MODEL PREDICTION ——
LSW ● HSW X

FIGURE 17

PATUXENT RIVER ESTUARY

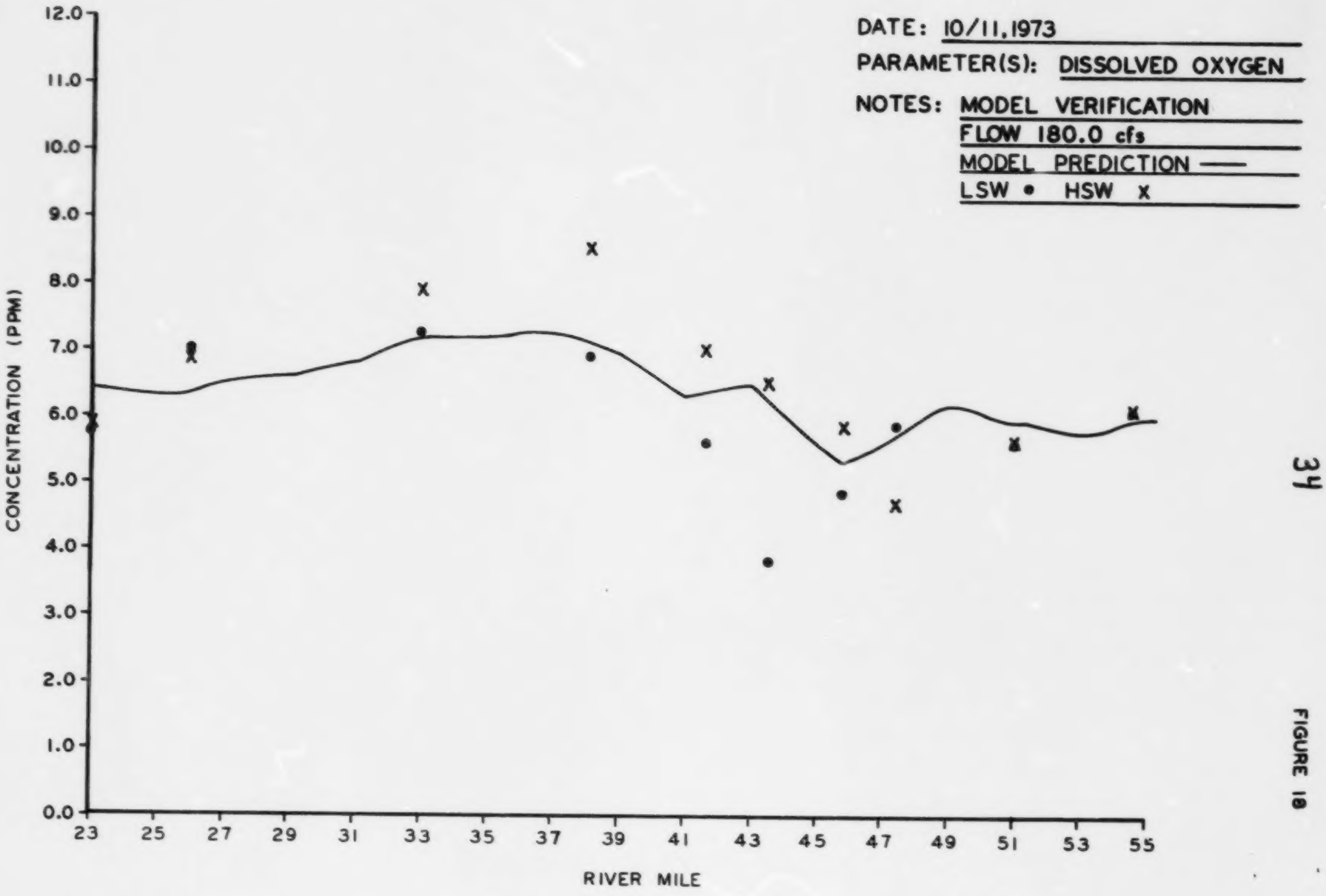


FIGURE 18

PATUXENT RIVER ESTUARY

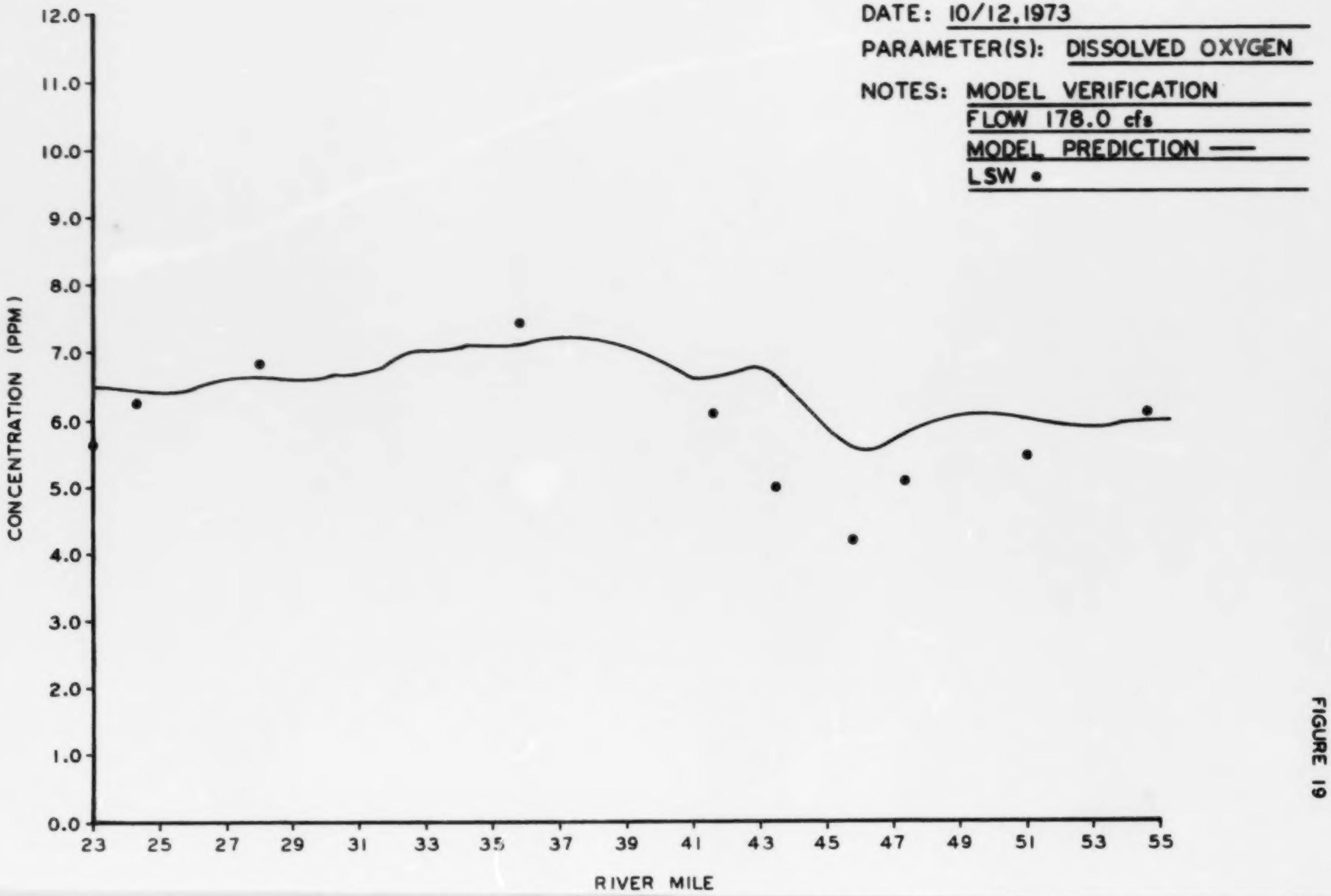
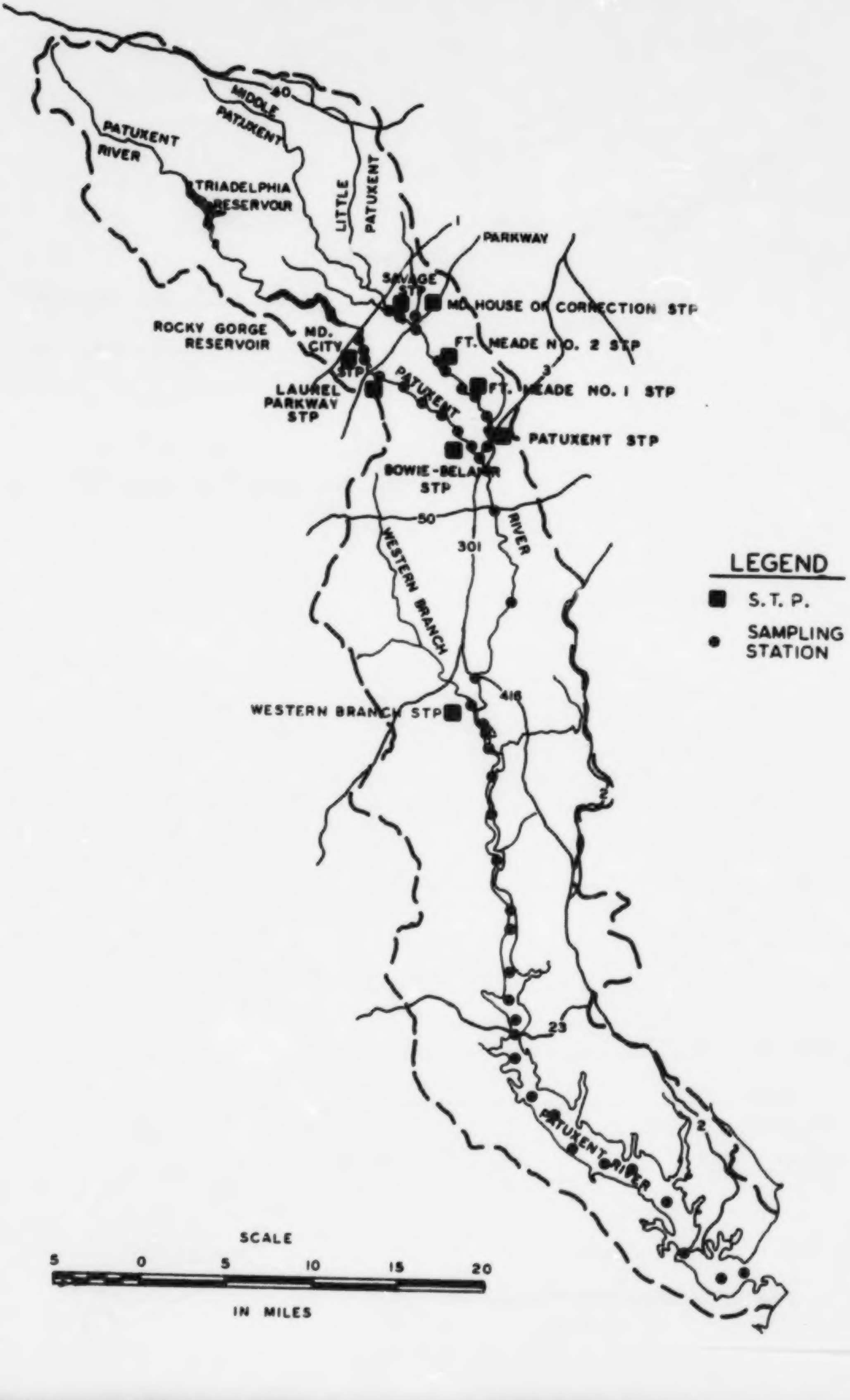


FIGURE 19

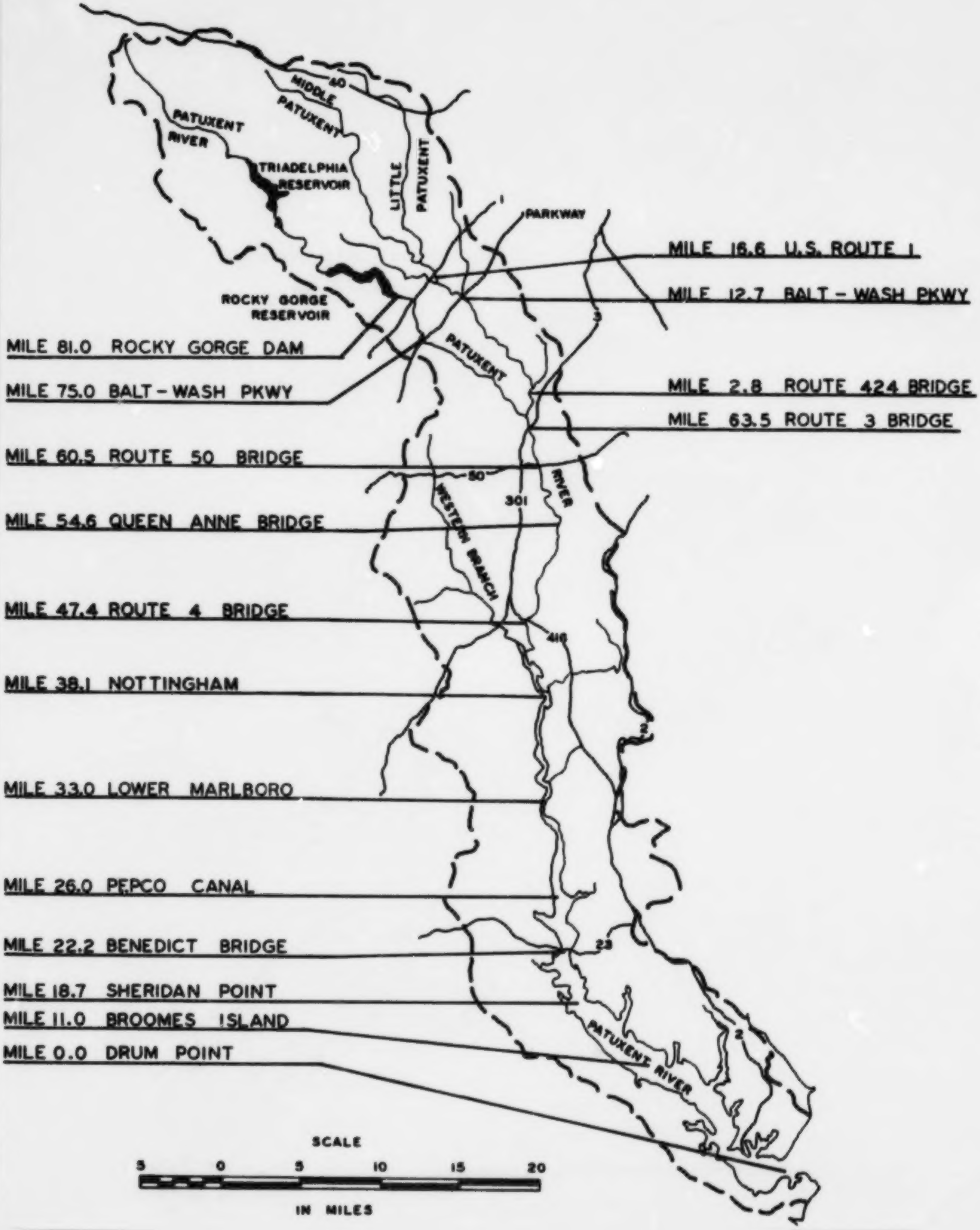
APPENDIX - A -

PATUXENT RIVER BASIN MAP
AND
STATION DESCRIPTIONS

PATUXENT RIVER BASIN



PATUXENT RIVER BASIN
SELECTED RIVER MILES



Patuxent Estuary Sampling Stations

Station No.	Location	River Mile
E23	Off Drum Point -- Buoy 5	0.0
E22	Sandy Point -- Buoy 8	1.8
E21	Point Patience -- Buoy 10	4.6
E20	Off Hooper Neck -- Buoy 12	6.5
E19	Off Rodney Point -- Buoy 14	8.7
E18	Broomes Island -- Buoy 16	11.4
E17	Off Jack Bay -- Buoy 18	15.2
E16	Off Prison Point -- Buoy 20	16.7
E15	Sheridan Point -- Buoy 21	18.7
E14A	Long Point -- Buoy 22	20.8
E14	Benedict Bridge	22.2
E13A	Teague Point -- Buoy 29	22.9
E13	Chalk Point -- Buoy 30	24.3
E12	Off PEPCO Intake Canal	26.0
E10A	Deep Landing	28.0
E10	Overhead Power Cable	29.7
E9	Lower Marlboro	33.0
E8A	Below Hall Creek	35.8
E8	Nottingham	38.1
E7	Lyons Creek Wharf	41.6
E6C	Lower Jug Bay	43.1
E6A	Middle Jug Bay	43.5
E6B	Upper Jug Bay	43.9

Station No.	Location	River Mile
E6	Mouth of Western Branch	44.8
E5B	Bristol Landing	45.8
E5	Route 4 Bridge	47.4
E2	Queen Anne Bridge	54.6

Patuxent River Sampling Stations

Station No.	Location	River Mile
1	Route 50 Bridge	60.5
9	Route 3 Bridge	63.5
9A	Above confluence with Little Patuxent	63.7
9B	Below Bowie-Belair S.T.P.	64.2
10A	Above Bowie-Belair S.T.P.	64.8
11	Near Bowie Race Track	66.4
12	Penn Central R.R. Bridge	68.5
13	Patuxent Wildlife Center -- Duvall Bridge	71.5
13A	Patuxent Wildlife Center	72.6
13C	Patuxent Wildlife Center	73.7
13D	Below Laurel - Parkway S.T.P.	74.6
14A	Brock Bridge -- above Laurel - Parkway S.T.P.	75.5
14B	Below Maryland City S.T.P.	77.5
14D	Above Maryland City S.T.P.	77.7

Little Patuxent River Sampling Stations

Station No.	Location	River Mile
L1	Above confluence with Patuxent River	0.2
L1A	Below Patuxent S.T.P.	1.8
L2	Route 424 Bridge -- above Patuxent S.T.P.	2.8
L3	Below Fort Meade S.T.P. #1	6.5
L2B	Above Fort Meade S.T.P. #1	6.7
L5A	Below Fort Meade S.T.P. #2	11.0
L5B	Above Fort Meade S.T.P. #2	11.2
L6	Baltimore-Washington Parkway	12.7
L6A	Dorsey Run before confluence with Little Patuxent River	12.8
L7C	Below Savage S.T.P.	15.5
L7D	Above Savage S.T.P.	15.7

APPENDIX - B -

STREAM DISCHARGE DATA

Reproduced from
best available copy.

PATUXENT RIVER BASIN

FLOW DATA (CFS)

DATE	Rocky Gorge (Patuxent R.) 80.9		Balt. Washington Parkway (Patuxent) 75.0		Brock Rdg. Rd. (Little Patux.) 15.3		St. Rt. 424 (Little Patux.) 2.8		Rt. 3 Bridge (Patuxent) 63.5		Rt. 50 Bridge (Patuxent) 60.5		Western Branch (Largo)
	Gage	Flow	Gage	Flow	Gage	Flow	Gage	Flow	Gage	Flow	Gage	Flow	Flow
6/4/73		144				(106)	1.44	186.0	6.68	344.0	5.74	411.0	19.0
6/5/73		194	3.64	230.0		200.0	2.20	315.0	7.76	740.0	7.55	785.0	25.0
6/6/73		158	3.58	216.0	2.20	115.0	1.55	204.0	6.99	442.0	6.27	494.0	20.0
6/7/73		175	3.39	180.0	2.26	128.0	1.65	221.0	6.70	349.0	5.89	434.0	19.0
7/9/73		25	1.92	40.0	1.84	98.0	1.16	123.0	5.80	175.0	4.75	228.0	15.0
7/10/73		25	1.88	38.0	1.80	93.0	1.10	111.0	5.66	155.0	4.44	182.0	35.0
7/11/73		25	1.90	39.0	1.86	100.0	1.20	131.0	5.86	184.0	4.74	226.0	108.0
7/12/73		25	1.86	37.0	1.82	95.0	1.24	139.0	5.81	177.0	4.57	200.0	24.0
10/9/73											4.04	136	9.3
10/10/73											4.01	134	9.0
10/11/73											3.97	131	8.4
10/12/73											3.95	129	8.2

APPENDIX - C -

WASTEWATER TREATMENT PLANT DATA

TREATMENT PLANT DATA

STREAM Patuxent

DATE 10/11 - 10/12 19 72

24 hr. COMPOSITE X GRAB ____

PLANT (RIVER MILE)	FLOW mgd	BOD							TKN mg/l	NH_3 mg/l	NO_2+NO_3 mg/l	TOC mg/l	TC mg/l	TP mg/l	Pi mg/l
		5													
Western Branch 45.0	5.1	4.4							14.08	13.80	4.35	25.01	35.53	0.73	0.34
Bowie-Belair 64.5	1.7	21.9							27.97	21.00	2.10	26.62	50.30	35.4	34.3
Laurel Parkway 74.5	3.8	28.3							22.41	16.00	0.17	33.81	56.91	28.10	23.80
Maryland City 77.5	0.9	8.3							30.74	24.00	1.28	18.15	59.38	30.6	28.7

TREATMENT PLANT DATA

STREAM Little Patuxent

DATE 10/11 - 10/12 19 72

24 hr. COMPOSITE X GRAB ____

PLANT (RIVER MILE)	FLOW mgd	BOD							TKN mg/1	NH_3 mg/1	NO_2+NO_3 mg/1	TOC mg/1	TC mg/1	TP mg/1	Pi mg/1
		5													
Patuxent 2.0	2.3	47.60							23.21	17.00	0.06	35.61	58.38	29.10	27.30
Fort Meade #1 6.5	1.7	29.0							17.06	14.90	2.85	25.24	46.37	23.10	20.38
Fort Meade #2 11.0	1.4	21.1							17.36	15.85	2.40	25.93	43.71	34.9	14.32
Md. House of Corr.-Dorsey Run. 12.8	0.4	25.4							16.46	15.30	0.28	26.44	61.19	13.40	12.70
Savage 15.5	2.9	25.0							10.71	10.20	4.55	22.37	40.25	20.0	17.56

TREATMENT PLANT DATA

STREAM Patuxent

DATE 6/5 - 6/6 1973

24 hr. COMPOSITE X GRAB ____

PLANT (RIVER MILE)	FLOW mgd	BOD							TKN mg/1	NH_3 mg/1	NO_2+NO_3 mg/1	TOC mg/1	TC mg/1	TP mg/1	Pi mg/1
		2	3	5	7	11	15	21							
Western Branch 45.0	5.4	62.2	77.6	89.8	111.0	136.8	143.4	148.8	13.9	8.45	1.9	38.95	61.76	25.26	
Bowie - Belair 64.5	2.5	8.6	19.6	19.2	22.6	29.8	37.4	73.0	35.58	29.0	0.08	23.63	54.23	33.91	
Laurel Parkway 74.5	5.4	2.2	6.6			3.8	18.0	16.4	29.18	27.0	0.26	45.72	73.95	67.86	34.50
Maryland City 77.5	0.6	0.6	3.6		0.6	2.6	7.0	24.0	13.64	9.0	1.55	11.84	38.95	46.68	7.10

TREATMENT PLANT DATA

STREAM Little Patuxent

DATE 6/5 - 6/6 19 73

24 hr. COMPOSITE X GRAB ____

PLANT (RIVER MILE)	FLOW mgd	BOD							TKN mg/1	NH_3 mg/1	NO_2+NO_3 mg/1	TOC mg/1	TC mg/1	TP mg/1	Pi mg/1
		2	3	5	7	11	15	21							
Patuxent 2.0	2.8	11.6	18.4	30.6	27.6	32.6	39.6	76.0	23.40	16.80	0.00	20.90	49.37	11.34	
Fort Meade #1 6.5	2.1	11.2	20.4	24.0	32.6	55.4	90.0	124.0	17.44	13.35	2.45	18.65	39.57	36.49	28.50
Fort Meade #2 11.0	1.8	6.6	4.8	1.8	0.8	4.6	5.2	8.4	18.22	14.70	0.62	25.94	47.76	26.59	27.00
Md. House of Corr. - Dorsey Run 12.8	0.7	15.6	23.6	32.0	36.8	50.2	67.0	121.6	14.01	10.95	0.04	26.53	54.95	12.81	11.25
Savage 15.5	4.4	10.8	16.2	27.4	28.4	73.4	73.0	99.4	12.86	10.25	1.55	9.91	38.94	40.61	31.50

49

TREATMENT PLANT DATA

STREAM Patuxent

DATE 6/5 - 6/6 19 73

24 hr. COMPOSITE X GRAB _

PLANT (RIVER MILE)	FLOW mgd	BOD							TKN mg/1	NH_3 mg/1	NO_2+NO_3 mg/1	TOC mg/1	TC mg/1	TP mg/1	Pi mg/1
		2	3	5	7	11	15	21							
Western Branch 45.0	5.4	62.2	77.6	89.8	111.0	136.8	143.4	148.8	13.9	8.45	1.9	38.95	61.76	25.26	
Bowie - Belair 64.5	2.5	8.6	19.6	19.2	22.6	29.8	37.4	73.0	35.58	29.0	0.08	23.63	54.23	33.91	
Laurel Parkway 74.5	5.4	2.2	6.6			3.8	18.0	16.4	29.18	27.0	0.26	45.72	73.95	67.86	34.50
Maryland City 77.5	0.6	0.6	3.6		0.6	2.6	7.0	24.0	13.64	9.0	1.55	11.84	38.95	46.68	7.10

TREATMENT PLANT DATA

STREAM Little Patuxent

DATE 6/5 - 6/6 19 73

24 hr. COMPOSITE X GRAB

PLANT (RIVER MILE)	FLOW mgd	BOD							TKN mg/1	NH_3 mg/1	NO_2+NO_3 mg/1	TOC mg/1	TC mg/1	TP mg/1	Pi mg/1
		2	3	5	7	11	15	21							
Patuxent 2.0	2.8	11.6	18.4	30.6	27.6	32.6	39.6	76.0	23.40	16.80	0.00	20.90	49.37	11.34	
Fort Meade #1 6.5	2.1	11.2	20.4	24.0	32.6	55.4	90.0	124.0	17.44	13.35	2.45	18.65	39.57	36.49	28.50
Fort Meade #2 11.0	1.8	6.6	4.8	1.8	0.8	4.6	5.2	8.4	18.22	14.70	0.62	25.94	47.76	26.59	27.00
Md. House of Corr. - Dorsey Run 12.8	0.7	15.6	23.6	32.0	36.8	50.2	67.0	121.6	14.01	10.95	0.04	26.53	54.95	12.81	11.25
Savage 15.5	4.4	10.8	16.2	27.4	28.4	73.4	73.0	99.4	12.86	10.25	1.55	9.91	38.94	40.61	31.50

TREATMENT PLANT DATA

STREAM Patuxent

DATE 7/10 - 7/11 19 73

24 hr. COMPOSITE X GRAB

PLANT (RIVER MILE)	FLOW mgd	BOD							TKN mg/1	NH_3 mg/1	NO_2+NO_3 mg/1	TOC mg/1	TC mg/1	TP mg/1	Pi mg/1
		5													
Western Branch 45.0	5.2	2.20							12.02	10.56	1.94	15.65	33.52	13.74	11.14
Bowie - Belair 64.5	2.1	29.80							26.31	30.31	0.12	32.59	54.13	37.38	35.22
Laurel Parkway 74.5	5.1	28.04							21.52	22.64	0.16	34.88	59.98	21.92	20.84
Maryland City 77.5	0.7	20.68							17.23	14.20	3.47	19.63	47.29	38.39	37.56

TREATMENT PLANT DATA

STREAM Little Patuxent

DATE 7/10 - 7/11 19 73

24 hr. COMPOSITE X GRAB

PLANT (RIVER MILE)	FLOW mgd	BOD							TKN mg/1	NH_3 mg/1	NO_2+NO_3 mg/1	TOC mg/1	TC mg/1	TP mg/1	Pi mg/1
		5													
Patuxent 2.0	2.6	14.28							19.02	18.80	0.10	20.01	41.29	23.84	24.62
Fort Meade #1 6.5	2.4	25.32							14.12	13.01	1.45	24.34	45.58	21.42	17.43
Fort Meade #2 11.0	1.6	4.60							15.05	14.04	1.49	22.59	38.55	21.22	14.39
Md. House of Corr. - Dorsey Run 12.8	1.3	6.40							8.07	5.39	2.53	14.43	29.22	19.40	12.04
Savage 15.5	3.9	20.62							13.45	11.78	0.13	18.23	42.17	11.73	8.50

APPENDIX - D -

WATER QUALITY SAMPLING DATA

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E23 RIVER MILE 0.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1258	LSW	SUR.	22.44	8.57				3.83	.510	.195	.170	.002	.060	3.0
		25'	20.62	8.86										
		40'	19.44	9.9										
		AVG.		8.98										
6/4/73 0605	HSW	SUR.	20.12	8.56										
		25'	19.64	8.65										
		40'	17.94	9.67										
		AVG.		8.84										
6/5/73 1342	LSW	SUR.	22.77	8.8				5.01	.425	.285	.200	.007	.081	
		25'	20.7	9.04										
		40'	20.34	9.34										
		AVG.		8.95										
6/5/73 0650	HSW	SUR.	20.70	7.90										
		25'	20.54	8.68										
		40'	19.90	9.08										
		AVG.		8.46										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E23 RIVER MILE 0.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/6/73 1418	LSW	SUR.	22.1	8.76		7.10		5.58	.466	.280	.155	.020	.078	
		25'	19.8	9.1										
		40'	18.58	9.75										
		AVG.		9.09										
6/6/73 0738	HSW	SUR.	21.34	8.52										
		25'	20.40	8.80										
		40'	19.93	9.0										
		AVG.		8.68										
6/7/73 1502	LSW	SUR.	20.84	9.1										
		25'	19.54	9.45										
		40'	17.87	10.55										
		AVG.		9.58										
6/7/73 0820	HSW	SUR.	21.74	8.82										
		25'	20.30	9.20										
		40'	19.45	9.64										
		AVG.		9.11										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E23 RIVER MILE 0.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1638	LSW	SUR.	29.31	8.88	15.93	10.50	2.58	6.31	.420	.262	.002	.008	.078	9.06
		25'	27.03	8.84	15.42									
		40'	26.23	9.86	16.8									
		AVG.		9.18										
7/9/73 1028	HSW	SUR.	27.24	8.72	15.3	8.30								
		25'	26.54	9.02	15.5									
		40'	26.1	9.3	15.94									
		AVG.		9.02										
7/10/73 1128	HSW	SUR.	28.3	8.84	15.7	8.57								
		25'	27.08	9.1	15.84									
		40'	26.52	9.4	16.2									
		AVG.		9.11										
7/10/73 1725	LSW	SUR.	27.97	8.8	15.57	10.14								
		25'	26.96	9.02	15.66									
		40'	26.1	10.0	16.9									
		AVG.		9.26										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E23 RIVER MILE 0.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73 1228	HSW	SUR.	27.45	9.1	15.88	7.73	3.20		.555	.407	.001	.016	.159	33.0
		25'	26.88	9.38	16.14									
		40'	25.75	10.4	17.5									
		AVG.		9.62										
7/12/73 1320	HSW	SUR.	26.86	8.95	15.56	7.04	2.51		.575	.441	.001	.005	.137	13.5
		25'	26.8	9.04	15.65									
		40'	26.87	9.44	16.2									
		AVG.		9.14										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E22 RIVER MILE 1.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1305	LSW	SUR.	21.86	8.56				4.37	.450	.225	.160	.004	.066	3.0
		25'	20.50	8.9										
		40'	20.73	9.04										
		AVG.		8.68										
6/4/73 0615	HSW	SUR.	20.17	8.60										
		25'	19.72	8.70										
		40'	19.72	8.90										
		AVG.		8.60										
6/6/73 1427	LSW	SUR.	22.2	8.83		6.47		4.78	.406	.270	.135	.010	.065	
		25'	20.62	9.0										
		40'	19.59	9.3										
		AVG.		8.89										
6/6/73 0746	HSW	SUR.	21.25	8.80										
		25'	20.78	8.80										
		40'	19.77	9.23										
		AVG.		8.78										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E22 RIVER MILE 1.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/7/73 1510	LSW	SUR.	21.48	8.84		5.79	1.90	4.50	.564			.010	.042	
		25'	19.46	9.50										
		40'	18.87	9.72										
		AVG.		9.16										
6/7/73 0829	HSW	SUR.	20.96	8.96										
		25'	20.05	9.20										
		40'	18.82	9.62										
		AVG.		9.08										
7/10/73 1734	LSW	SUR.	28.8	8.7	15.56	10.83	3.48		.590	.120	.001	.066	.328	47.3
		25'	26.8	9.16	15.78									
		40'	26.54	9.45	16.25									
		AVG.		9.02										
7/10/73 1135	HSW	SUR.	28.0	8.84	15.65	8.83								
		25'	27.14	8.86	15.38									
		40'	26.84	9.04	15.68									
		AVG.		8.88										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E22 RIVER MILE 1.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/12/73 1330	HSW	SUR.	26.8	8.82	15.38	7.03	3.02		.557	.435	.001	.003	.157	15.0
		25'	26.76	8.85	15.38									
		40'	26.73	9.0	15.58									
		AVG.		8.87										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E21 RIVER MILE 4.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1316	LSW	SUR.	21.53	8.37				4.30	.435	.195	.100	.006	.066	6.8
		25'	21.05	8.73										
		40'	20.83	8.76										
		90'	20.20	9.14										
		AVG.		8.54										
6/4/73 0621	HSW	SUR.	19.95	8.60										
		25'	19.70	8.76										
		40'	19.68	8.85										
		90'	19.23	9.16										
		AVG.		8.63										
6/5/73 1356	LSW	SUR.	23.3	8.3				4.93	.408	.165	.080	.015	.076	
		25'	21.32	8.8										
		40'	20.98	8.95										
		90'	20.16	9.38										
		AVG.		8.64										
6/5/73 0703	HSW	SUR.	21.76	8.28										
		25'	20.36	8.9										
		40'	20.13	9.0										
		90'	19.70	9.22										
		AVG.		8.64										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E21** RIVER MILE 4.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/7/73 1520	**LSW**	**SUR.**	22.82	8.42		8.30		5.11	.555			.015	.068	
		25'	21.42	8.90										
		40'	20.68	9.10										
		90'	19.37	9.66										
		AVG.		8.79										
6/7/73 0839	**HSW**	**SUR.**	21.0	8.97										
		25'	20.24	9.20										
		40'	20.18	9.20										
		90'	19.05	9.65										
		AVG.		9.04										
7/9/73 1652	**LSW**	**SUR.**	30.18	8.2	15.0	12.95	4.56	7.16	.486	.416	.001	.018	.184	36.0
		25'	27.5	8.56	15.04									
		40'	27.4	8.64	15.11									
		90'	27.0	8.9	15.5									
		AVG.		8.56										
7/9/73 1044	**HSW**	**SUR.**	27.26	8.76	15.24	5.54								
		25'	26.92	8.8	15.2									
		40'	26.83	8.8	15.2									
		90'	26.76	8.82	15.32									
		AVG.		8.79										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E21 RIVER MILE 4.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73	HSW	SUR.	28.78	8.2	14.62	9.42	3.25		.614	.447	.001	.023	.172	15.0
		25'	26.68	9.12	15.92									
		40'	26.3	9.38	16.42									
		90'	24.9	11.32	18.98									
		AVG.		9.44										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E20 RIVER MILE 6.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/6/73 1439	LSW	SUR.	23.84	8.14		7.63		6.16	.423	.155	.060	.020	.069	
		25'	21.13	8.8										
		40'	20.86	8.85										
		AVG.		8.48										
6/6/73 0800	HSW	SUR.	20.86	8.90										
		25'	20.16	9.20										
		40'	20.20	9.20										
		AVG.		8.99										
7/10/73 1747	LSW	SUR.	30.05	7.93	14.52	12.85	1.52		.753	.129	.410	.183	.358	28.5
		25'	26.86	8.9	15.44									
		40'	26.76	9.1	15.7									
		AVG.		8.6										
7/10/73 1146	HSW	SUR.	29.6	8.1	14.9	10.37								
		25'	27.24	8.92	15.56									
		40'	26.93	9.2	15.92									
		AVG.		8.7										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E20 RIVER MILE 6.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/12/73 1345	HSW	SUR.	27.06	8.37	14.54	6.73	2.90		.566	.422	.001	.008	.162	4510
		25'	26.84	8.53	14.83									
		40'	26.36	9.6	16.4									
		AVG.		8.79										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E19** RIVER MILE 8.7

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/5/73 1410	**LSW**	**SUR.**	23.62	7.82				4.78	.358	.135	.055	.009	.066	
		25'	20.57	8.44										
		40'	20.4	8.78										
		AVG.		8.00										
6/5/73 0720	**HSW**	**SUR.**	22.20	7.86										
		25'	19.90	8.66										
		40'	19.76	8.88										
		AVG.		8.11										
7/9/73 1057	**HSW**	**SUR.**	28.84	8.0	14.34	10.26								
		25'	27.07	8.6	15.0									
		AVG.		7.44										
7/9/73 1706	**LSW**	**SUR.**	30.5	7.8	14.5	13.60								
		25'	26.74	8.6	14.95									
		40'	26.64	8.74	15.13									
		AVG.		8.22										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E19** RIVER MILE 8.7

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73 1300	**HSW**	SUR.	28.0	7.8	14.18	8.36								
		25'	26.6	9.16	16.02									
		40'	25.2	8.78	16.5									
		AVG.		8.43										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E18** RIVER MILE **11.4**

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	1334	LSW	SUR.	23.94	7.5				4.75	.398	.145	.040	.010	.049	6.0
			25'	19.98	8.34										
			40'	20.18	8.4										
			AVG		7.76										
6/4/73	0645	HSW	SUR.	21.50	7.60										
			25'	19.63	8.32										
			40'	19.23	8.54										
			AVG.		7.82										
6/5/73	1419	LSW	SUR.	24.34	7.24				5.27	.400	.130	.030	.011	.081	
			25'	20.26	8.32										
			40'	20.28	8.36										
			AVG.		7.66										
6/5/73	0730	HSW	SUR.	22.85	7.51										
			25'	20.16	8.38										
			40'	19.68	8.52										
			AVG.		7.81										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E18** RIVER MILE **11.4**

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/7/73 1539	**LSW**	**SUR.**	24.48	7.6		7.89	1.9	3.88	.506			.023	.038	
		25'	20.5	8.32										
		40'	20.13	8.6										
		AVG.		7.84										
6/7/73 0858	**HSW**	**SUR.**	23.50	7.76										
		25'	20.45	8.45										
		40'	20.10	8.66										
		AVG.		7.96										
7/9/73 1715	**LSW**	SUR.	31.3	7.6	14.24	11.73	3.60	6.25	.370	.462	.001	.012	.119	16.5
		25'	27.21	8.16	14.3									
		40'	26.77	8.6	14.8									
		AVG.		7.87										
7/9/73 1106	**HSW**	**SUR.**	28.33	7.7	13.76	8.78								
		25'	26.65	8.55	14.87									
		40'	26.5	8.7	15.0									
		AVG.		8.09										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E18 RIVER MILE 11.4

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/10/73 1802	LSW	SUR.	31.17	7.3	13.6	14.09	2.28		.753	.210	.595	.349	.476	22.5
		25'	26.78	8.5	14.8									
		40'	26.6	8.7	14.96									
		AVG.		7.91										
7/10/73 1157	HSW	SUR.	29.88	7.5	13.74	12.85								
		25'	27.18	8.45	14.7									
		40'	27.27	8.62	15.1									
		AVG.		7.95										
7/11/73 1310	HSW	SUR.	28.08	7.41	13.52	8.15	4.32		.681	.528	.001	.039	.240	45.0
		25'	26.65	8.58	15.18									
		40'	26.52	9.22	15.75									
		AVG.		8.09										
7/12/73 1400	HSW	SUR.	26.7	7.9	13.72	6.95	2.89		.539	.428	.001	.014	.147	61.5
		25'	26.51	8.14	14.28									
		40'	26.22	9.83	16.12									
		AVG.		8.22										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E17** RIVER MILE **15.2**

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/6/73	1501	LSW	SUR.	24.8	7.0		7.60		5.14	.475	.125	.001	.030	.099	
			25'	20.4	8.02										
			40'	20.38	8.1										
			AVG.		7.33										
6/6/73	0821	HSW	SUR.	20.39	7.30										
			25'	19.93	8.24										
			40'	19.82	8.33										
			AVG.		7.59										
7/9/73	1116	HSW	SUR.	29.2	7.3	13.3	10.37								
			25'	25.48	8.52	14.66									
			40'	26.28	8.8	15.06									
			AVG.		7.92										
7/9/73	1728	LSW	SUR.	31.1	7.1	13.23	12.36								
			25'	26.4	8.54	14.7									
			40'	26.2	8.7	14.94									
			AVG.		7.81										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E17** RIVER MILE 15.2

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73 1322	HSW	SUR.	28.1	7.29	13.05	7.39								
		25'	26.61	8.5	15.0									
		40'	26.4	8.61	15.08									
		AVG.		7.88										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E16** RIVER MILE **16.7**

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/5/73 1433	LSW	SUR.	24.4	6.67				5.70	.442	.010	.001	.015	.157	
		25'	20.26	8.01										
		40'	20.02	8.2										
		AVG.		7.05										
6/5/73 0745	HSW	SUR.	22.67	6.80										
		25'	19.71	8.14										
		40'	19.30	8.26										
		AVG.		7.16										
7/10/73 1818	LSW	SUR.	31.0	6.42	12.11	11.05	1.86		.813	.261	.552	.333	.770	12.8
		25'	26.55	8.5	14.68									
		AVG.		7.12										
7/10/73 1214	HSW	SUR.	29.4	6.74	12.37	9.30								
		25'	26.7	8.54	14.86									
		AVG.		7.35										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E16** RIVER MILE **16.7**

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/12/73 1420	**HSW**	**SUR.**	26.65	7.75	13.43	5.37	2.79		.513	.361	.001	.018		66.0
		25'	26.38	9.1	15.7									
		AVG.		8.21										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E15** RIVER MILE 18.7

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH$_3$-N ppm	NO$_2$+NO$_3$ ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1352	LSW	SUR.	23.88	5.64				5.69	.405	.095	.030	.019	.182	22.5
		20'	20.78	7.6										
		AVG.		6.22										
6/4/73 0701	HSW	SUR.	21.66	6.48										
		20'	19.76	7.80										
		AVG.		6.84										
6/6/73 1513	LSW	SUR.	24.8	5.85		7.89		6.76	.544	.095	.001	.060	.222	
		20'	21.8	7.3										
		AVG.		6.26										
6/6/73 0832	HSW	SUR.	23.54	6.52										
		20'	20.30	7.94										
		AVG.		6.92										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E15** RIVER MILE **18.7**

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/7/73 1557	**LSW**	**SUR.**	24.9	5.8		8.45		5.97	.564			.055	.157	
		20'	22.53	7.12										
		AVG.		6.16										
6/7/73 0915	**HSW**	**SUR.**	23.90	6.50										
		20'	22.10	7.30										
		AVG.		6.69										
7/9/73 1742	**LSW**	**SUR.**	29.76	6.1	11.24	7.96	3.12	5.84	.428	.377	.001	.030	.224	19.5
		25'	26.84	8.02	14.01									
		AVG.		6.74										
7/9/73 1129	**HSW**	**SUR.**	29.82	6.73	12.43	8.94								
		25'	26.65	8.24	14.3									
		AVG.		7.24										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E15** RIVER MILE 18.7

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73 1334	**HSW**	**SUR.**	28.43	6.51	11.98	7.81	6.88		.782	.435	.001	.074	.432	103.5
		20'	26.77	8.52	14.7									
		AVG.		7.19										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E14A** RIVER MILE **20.8**

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/5/73 1447	LSW	SUR.	24.58	4.92				5.68	.500	.050	.001	.026	.318	
		25'	22.34	6.55										
		40'	21.12	6.86										
		AVG.		5.52										
6/5/73 0755	HSW	SUR.	22.84	6.16										
		25'	21.0	7.27										
		40'	20.32	7.60										
		AVG.		6.53										
7/10/73 1830	LSW	SUR.	30.68	5.4	10.13	9.55	2.62		.830	.177	.766	.333	.748	31.5
		25'	27.34	7.75	13.63									
		AVG.		6.39										
7/10/73 1230	HSW	SUR.	30.4	6.23	11.54	8.56								
		25'	27.2	8.0	13.96									
		40'	27.1	8.2	14.3									
		AVG.		7.01										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E14A** RIVER MILE 20.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/12/73 1432	HSW	SUR.	26.7	6.82	12.05	5.78	3.34		.557	.309	.001	.042	.230	99.0
		25'	26.44	8.0	13.94									
		AVG.		7.32										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E14 RIVER MILE 22.2

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1406	LSW	SUR.	25.45	4.3				6.19	.465	.060	.040	.023	.290	54.8
		20'	23.57	4.82										
		AVG.		4.48										
6/4/73 0713	HSW	SUR.	21.90	5.74										
		20'	21.07	6.92										
		AVG.		6.19										
6/6/73 1524	LSW	SUR.	26.0	4.2		7.92		6.76	.587	.045	.001	.100	.441	
		20'	25.04	4.77										
		AVG.		4.40										
6/6/73 0845	HSW	SUR.	24.0	5.76										
		20'	20.38	6.0										
		AVG.		5.80										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E14** RIVER MILE 22.2

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/7/73	1610	LSW	SUR.	26.58	4.12		9.07	3.19	7.07	.613			.085	.280	
			20'	25.22	4.6										
			AVG.		4.28										
6/7/73	0925	HSW	SUR.	24.10	5.83										
			20'	23.90	6.10										
			AVG.		5.88										
7/9/73	1752	LSW	SUR.	31.08	4.6	8.75	8.14	2.94	6.7	.428	.194	.001	.054	.319	43.5
			25'	30.1	5.0	9.34									
			AVG.		4.78										
7/9/73	1144	HSW	29.0	6.1	11.1	9.51									
			15'	28.42	6.35	11.45									
			AVG.		6.21										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E14** RIVER MILE 22.2

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73 1348	**HSW**	**SUR.**	28.65	6.11	11.16	6.80	3.00		.521	.349	.001	.058	.268	27.0
		20'	27.14	7.86	13.8									
		AVG.		6.89										
10/9/73 0830	**LSW**	**SUR.**	22.35	9.60	14.55	6.73	2.27	6.00	.495	.230	.060	.155	.300	43.5
		20'	22.44	10.20	15.00	5.87								
		AVG.				6.30								
10/9/73 1458	**HSW**	**SUR.**	22.40	10.20	16.24	6.61								
		20'	22.35	10.80	17.10	5.48								
		AVG.				6.05								
10/10/73 0900	**LSW**	**SUR.**	22.30	9.40	14.80	6.39	3.55	6.91	.518	.240	.025	.180	.306	
		20'	22.00	9.60	15.36	5.16								
		AVG.				5.78								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E14 RIVER MILE 22.2

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/10/73 1435	HSW	SUR.	22.34	10.78	17.04	6.82								
		20'	22.23	11.50	17.22	4.95								
		AVG.				5.89								
10/11/73 0945	LSW	SUR.	22.50	9.10	14.85	6.06	4.10	6.71	.627	.150	.555	.175	.620	
		20'	20.80	9.05	13.45	5.39								
		AVG.				5.73								
10/11/73 1510	HSW	SUR.	22.10	10.40	17.09	5.80								
		20'	21.50	10.78	17.24	5.84								
		AVG.				5.82								
10/12/73 1007	LSW	SUR.	21.20	9.72	15.15	5.80	2.22	6.35	.526	.265	.030	.190	.400	
		20'	20.71	10.65	15.82	5.52								
		AVG.				5.66								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E13A** RIVER MILE 22.9

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/5/73 0745	HSW	SUR.	23.12	5.29		7.65		6.50	.592	.065	.030	.024	.349	
		10'	22.04	6.39										
		AVG.		5.63										
6/5/73 1440	LSW	SUR.	25.7	3.8										
		10'	22.24	4.53										
		AVG.		4.02										
7/10/73 1745	LSW	SUR.	32.45	4.66	8.75	7.94	5.76		.667	.390	.001	.029	.798	96.0
7/10/73 1240	HSW	SUR.	30.82	5.5	10.52	6.48								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E13A** RIVER MILE 22.9

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/12/73 1432	HSW	SUR.	27.75	6.52	11.0	5.88	2.41		.513	.218	.001	.051	.256	58.5

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E13 RIVER MILE 24.3

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/6/73 1545	LSW	SUR.	25.95	2.8		8.50		7.11	.712	.045	.105	.140	.105	
		10'	26.14	3.44										
		AVG.		3.08										
6/6/73 0850	HSW	SUR.	24.4	4.25										
		10'	23.7	5.35										
		AVG.		4.74										
7/9/73 1135	HSW	SUR.	30.8	4.6	8.2	9.91								
7/9/73 1800	LSW	SUR.	32.45	3.9	7.4	7.40								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E13 RIVER MILE 24.3

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73 1345	HSW	SUR.	29.8	5.1	9.1	8.23								
10/10/73 0905	LSW	SUR.	21.80	8.10	12.80	6.18	3.46	7.86	.502	.180	.025	.215	.379	
		10'	30.50	9.30	14.10	6.00								
		AVG.				6.09								
10/10/73 1455	HSW	SUR.	21.88	10.32	16.04	5.89								
		10'	21.80	10.76	16.42	5.22								
		AVG.				5.56								
10/12/73 1020	LSW	SUR.	20.80	8.59	13.25	6.50		6.58	.557	.170	.020	.160	.395	
		10'	20.98	9.30	14.60	5.99								
		AVG.				6.25								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E12** RIVER MILE 26.0

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	0720	**HSW**	**SUR.**	23.00	2.75		7.78		7.28	.630	.070	.195	.042	.321	22.5
			10'	22.17	4.77										
			AVG.		3.48										
6/4/73	1350	**LSW**	**SUR.**	25.85	1.5										
			10'	24.85	2.4										
			AVG.		1.82										
6/6/73	1550	**LSW**	**SUR.**	25.25	1.56		7.38		6.82	.760	.070	.355	.205	.575	
			10'	25.15	1.8										
			AVG.		1.63										
6/6/73	0900	**HSW**	**SUR.**	26.4	3.95										
			10'	24.45	4.5										
			AVG.		4.11										

88

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E12 RIVER MILE 26.0

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH$_3$-N ppm	NO$_2$+NO$_3$ ppm	Pi ppm	TP ppm	Chlor a
6/7/73	1015	HSW	SUR.	25.35	4.1		6.53		7.15	.754			.090	.313	
			10'	25	4.1										
			AVG.		4.05										
6/7/73	0940	HSW	SUR.	26.52	4.0										
			10'	25.04	3.90										
			AVG.		3.92										
6/7/73	1620	LSW	SUR.	25.	1.76			1.94							
			10'	25.16	2.34										
			AVG.		1.95										
7/9/73	1806	LSW	SUR.	30.6	1.5	2.6	5.27	2.60	6.28	.725	.162	.412	.156	.446	22.5

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E12** RIVER MILE 26.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1150	HSW	SUR.	32.81	4.62	8.95	6.04								
7/10/73 1250	HSW	SUR.	32.76	4.75	9.0	6.61								
7/10/73 1755	LSW	SUR.	32.05	2.55	4.46	7.85								
7/11/73 1353	HSW	SUR.	31.85	5.1	9.4	6.33	2.08		.504	.138	.001	.080	.317	37.5

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E12** RIVER MILE 26.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor A
7/12/73 1443	HSW	SUR.	29.0	4.26	7.85	7.15								
10/9/73 0844	LSW	SUR.	22.80	5.80	10.03	7.03		22.72	1.897	.160	.020	.410	1.527	510.0
		10'	23.92	7.41	12.22	6.66								
		AVG.				6.85								
10/9/73 1512	HSW	SUR.	24.40	9.15	14.36	6.79								
		10'	21.70	8.80	14.70	6.35								
		AVG.				6.57								
10/11/73 1000	LSW	SUR.	23.15	6.85	11.56	6.61		6.26	.533	.255	.045	.210	.480	
		10'	24.40	8.25	12.75	7.38								
		AVG.				7.00								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E12** RIVER MILE 26.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/11/73 1525	HSW	SUR.	24.50	9.20	14.60	7.11								
		20'	21.94	8.70	14.10	6.53								
		AVG.				6.82								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E10A** RIVER MILE 28.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/5/73 0805	HSW	SUR.	23.94	2.98		7.61		6.12	.617	.050	.165	.052	.457	
		10'	24.26	3.65										
		AVG.		3.25										
6/5/73 1450	LSW	SUR.	24.86	0.55										
		10'	24.33	0.5										
		AVG.		0.51										
7/10/73 1802	LSW	SUR.	30.15	1.0	2.15	4.72	4.34		.607	.414	.001	.034	.354	67.5
7/10/73 1300	HSW	SUR.	32.77	3.36	6.65	7.81								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E10A** RIVER MILE 28.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH$_3$-N ppm	NO$_2$+NO$_3$ ppm	Pi ppm	TP ppm	Chlor a
7/12/73 1450	**HSW**	**SUR.**	29.3	2.54	4.42	7.07	1.86		.610	.071	.222	.092	.411	85.5
10/10/73 0915	**LSW**	**SUR.**	21.80	4.50	7.60	6.56	6.16	11.59	.725	.075	.025	.213	.518	
		10'	22.00	5.30	8.75	5.94								
		AVG.				6.25								
10/10/73 1505	**HSW**	**SUR.**	22.34	6.90	10.98	8.95								
		10'	22.92	8.40	12.80	5.38								
		AVG.				7.17								
10/12/73 1045	**LSW**	**SUR.**	20.45	3.46	5.25	7.05	4.68	9.42	.649	.030	.055	.170	.510	
		10'	20.05	4.08	6.34	6.63								
		AVG.				6.84								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E10** RIVER MILE 29.7

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	0745	**HSW**	**SUR.**	22.66	1.79		7.63		6.54	.555	.060	.390	.091	.510	29.3
			10'	22.92	2.36										
			AVG.		2.10										
6/4/73	1400	**LSW**	**SUR.**	24.45	0.20										
			10'	23.8	0.25										
			AVG.		0.22										
6/5/73	1505	**LSW**	**SUR.**	25.2	0.08										
			10'	25.	0.07										
			AVG.		0.06										
6/7/73	1030	**HSW**	**SUR.**	25.17	1.77		7.16		8.55	.904			.135	.463	
			10'	25.22	1.95										
			AVG.		1.87										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E10** RIVER MILE 29.7

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/7/73	0950	HSW	SUR.	25.36	1.50										
			10'	25.36	1.74										
			AVG.		1.63										
6/7/73	1630	LSW	SUR.	24.9	0.32										
			10'	24.43	0.26										
			AVG.		0.27										
7/9/73	1820	LSW	SUR.	29.32	0.2	0.32	4.06	1.98	6.23	.7 00	.259	.675	.368	.722	28.5
7/9/73	1200	HSW	SUR.	31.2	1.31	2.46	6.31								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E10** RIVER MILE 29.7

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/10/73 1305	HSW	SUR.	31.45	1.66	3.08	6.26								
7/10/73 1809	LSW	SUR.	29.53	0.1	0.5	3.67								
7/11/73 1405	HSW	SUR.	30.26	1.55	3.0	6.24	3.62		.639	.100	.308	.124	.549	112.5
7/12/73 1500	HSW	SUR.	28.9	1.27	2.05	5.49								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E9 RIVER MILE 33.0

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	0800	HSW	SUR.	22.74	0.6		6.94		6.35	.585	.105	.720	.123	.468	31.5
			10'	22.77	0.64										
			AVG.		0.61										
6/4/73	1410	LSW	SUR.	24.55	0.1										
			10'	24.35	0.15										
			AVG.		0.1[illegible]										
6/5/73	0820	HSW	SUR.	23.71	0.54		6.82		7.58	.583	.060	.615	.102	.638	
			10'	23.68	0.58										
			AVG.		0.55										
6/6/73	1610	LSW	SUR.	25.5	0.0		8.93		7.49	.7 94	.035	.605	.255	.607	
			10'	25.28	0.0										
			AVG.		0.0										

98

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E9 RIVER MILE 33.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor A
6/6/73 0920	HSW	SUR.	24.6	0.6										
		10'	24.55	0.63										
		AVG.		0.61										
6/7/73 1045	HSW	SUR.	25.	.7		7.31		7.07	.763			.140	.362	
		10'	25.	.7										
		AVG.		0.69										
6/7/73 0958	HSW	SUR.	25.30	.62										
		10'	25.26	.70										
		AVG.		0.66										
6/7/73 1640	LSW	SUR.	24.94	0.16			2.40							
		10'	24.96	0.14										
		AVG.		0.14										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E9 RIVER MILE 33.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1830	LSW	SUR.	29.55	0.2	0.25	4.33		6.05	.650	.288	.649	.392	.572	18.0
7/9/73 1210	HSW	SUR.	29.46	0.28	0.61	5.42								
7/10/73 1818	LSW	SUR.	30.0	0.0	0.15	4.46	4.42		.573	.370	.001	.029	.289	36.0
7/10/73 1315	HSW	SUR.	29.76	0.3	0.5	3.76								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E9** RIVER MILE 33.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73 1415	HSW	SUR.	29.55	0.55	0.8	4.33	2.36		.630	.274	.549	.266	.650	22.5
7/12/73 1509	HSW	SUR.	28.5	0.25	0.35	4.72	1.60		.734	.227	.582	.288	.777	30.8
10/9/73 0915	LSW	SUR	21.24	.50	1.12	7.95	2.35	8.23	.770	.030	.440	.190	.455	66.0
		10'	21.44	.41	1.20	7.45								
		AVG.				7.70								
10/9/73 1530	HSW	SUR.	20.70	4.00	6.52	8.13								
		10'	21.70	4.10	6.88	7.12								
		AVG.				7.63								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E9 RIVER MILE 33.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/11/73 1025	LSW	SUR.	21.05	1.25	1.83	7.30	2.70	8.23	.627	.140	.065	.225	.520	
		10'	19.70	.90	1.94	7.28								
		AVG.				7.29								
10/11/73 1545	HSW	SUR.	21.60	3.78	6.28	8.25								
		10'	21.54	4.22	6.42	7.51								
		AVG.				7.88								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E8A** RIVER MILE 35.8

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	0815	HSW	SUR.	22.68	0.22		6.30		6.65	.706	.130	.845	.164	.552	25.5
			20'	22.60	0.22										
			AVG.		0.21										
6/4/73	1420	LSW	SUR.	25.77	0.18										
			20'	24.33	0.08										
			AVG.		0.12										
6/5/73		HSW	SUR.	23.66	0.16		6.75		6.68	.671	.070	.760	.146	.548	
			20'	23.8	0.16										
			AVG.		0.15										
6/5/73	1520	LSW	SUR.	26.05	0.0										
			20'	24.95	0.0										
			AVG.		0.0										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E8A** RIVER MILE 35.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/6/73 1620	**LSW**	**SUR.**	25.88	0.08		8.74		7.58	.786	.080	.725	.300	.707	
		20'	25.48	0.08										
		AVG.		0.07										
6/6/73 0930	**HSW**	**SUR.**	24.5	0.07										
		20'	24.35	0.06										
		AVG.		0.06										
6/7/73 1055	**HSW**	**SUR.**	24.95			7.83		6.86	.950			.158	.347	
		20'	24.93											
		AVG.												
6/7/73 1007	**HSW**	**SUR.**	25.3	.10										
		20'	25.3	.10										
		AVG.		0.09										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E8A** RIVER MILE 35.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/7/73 1710	**LSW**	**SUR.**	25.46	0.07			2.39							
		20'	25.1	0										
		AVG.		0.03										
7/9/73 1840	**LSW**	**SUR.**	29.75	0.09	0.22	4.88	1.79	5.97	.650	.310	.584	.391	.686	16.5
7/9/73 1225	**HSW**	**SUR.**	29.0	0.1	0.3	3.67								
7/10/73 1322	**HSW**	**SUR.**	29.85	0.0	0.19	3.87								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E8A** RIVER MILE 35.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/10/73 1830	LSW	SUR.	30.0	0	0									
7/11/73 1427	HSW	SUR.	29.0	0.2	0.3	3.90	1.68		.765	.330	.637	.345	.709	28.5
7/12/73 1517	HSW	SUR.	27.55	0.0	0.2	5.26								
10/10/73 0940	LSW	SUR.	20.80	.40	.66	6.66		9.00	.709	.075	.460	.290	.592	
		20'	20.70	.30	.70	7.00								
		AVG.				6.83								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E8A** RIVER MILE 35.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/10/73 1525	HSW	SUR.	21.23	1.80	2.74	8.22								
		20'	21.00	1.86	3.06	7.35								
		AVG.				7.79								
10/12/73 1103	LSW	SUR.	19.68	.80	1.20	7.48		8.23	.711	.020	.315	.230	.630	
		20'	19.42	.83	1.32	7.52								
		AVG.				7.50								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E8** RIVER MILE 38.1

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 0830	HSW	SUR.	22.76	0.15		6.47		6.96	.728	.145	.890	.179	.567	25.5
		20'	22.70	0.10										
		AVG.		0.12										
6/4/73 1435	LSW	SUR.	24.55	0.11										
		20'	24.06	0.15										
		AVG.		0.12										
6/5/73 0850	HSW	SUR.	23.88	0.14		6.89		5.81	.708	.095	.805	.168	.529	
		20'	23.85	0.10										
		AVG.		0.11										
6/5/73 1525	LSW	SUR.	26.75											
		20'	24.7											
		AVG.												

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E8 RIVER MILE 38.1

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/6/73	1630	LSW	SUR.	26.88	0.06		9.84		6.84	.786	.060	.715	.335	.678	
			20'	25.55	0.1										
			AVG.		0.07										
6/6/73	0935	HSW	SUR.	24.55	0.1										
			20'	24.5	0.08										
			AVG.		0.08										
6/7/73	1105	HSW	SUR.	24.9			7.89		6.41	.937			.170	.348	
			20'	25.	.08										
			AVG.		0.04										
6/7/73	1017	HSW	SUR.	25.32	.05										
			20'	25.3	.03										
			AVG.		0.03										

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E8** RIVER MILE 38.1

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH$_3$-N ppm	NO$_2$+NO$_3$ ppm	Pi ppm	TP ppm	Chlor a
6/7/73	1720	LSW	SUR.	25.	0										
			20'	24.7	0										
			AVG.		0.0										
7/9/73	1850	LSW	SUR.	28.7	0.19	0.2	4.40	1.32	6.35	.634	.374	.628	.395	.719	9.0
7/9/73	1235	HSW	SUR.	29.55	0.11	0.23	4.36								
7/10/73	1835	LSW	SUR.	29.13	0.0	0.2	4.66	3.50		.496	.387	.001	.036	.208	37.5

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E8** RIVER MILE 38.1

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/10/73 1330	**HSW**	**SUR.**	30.0	0.0	0.1	4.90								
/11/73 1435	**HSW**	**SUR.**	29.55	0.2	0.3	5.30	2.47		.828	.239	.583	.317	.658	25.5
7/12/73 1525	**HSW**	**SUR.**	27.35	0.0	0.19	5.85	1.78		.780	.253	.542	.279	.694	22.5
10/9/73 0940	**LSW**	**SUR.**	20.66		.20	6.14		9.58	.853	.185	.690	.280	.528	31.5
		20'	20.20	.42	.68	6.11								
		AVG.				6.13								

112

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E8** RIVER MILE 38.1

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/9/73 1550	HSW	SUR.	21.20	.60	.82	8.28								
		20'	21.24	.60	.96	8.43								
		AVG.				8.36								
10/11/73 1040	LSW	SUR.	20.45	0.00	.45	7.85		8.72	.808	.040	.275	.270	.737	
		20'	20.65	0.00	.45	5.97								
		AVG.				6.91								
10/11/73 1600	HSW	SUR.	21.44	.52	1.34	8.46								
		20'	21.02	.90	1.20	8.60								
		AVG.				8.53								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E-7** RIVER MILE **41.6**

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 0845	HSW		22.6			5.68		5.82	.788	.245	.940	.245	.652	15.8
6/4/73 1445	LSW		26.55											
6/5/73 0900	HSW	SUR.	23.65	0.07		5.77		4.54	.892	.245	.900	.246	.626	
		20	23.65	0.08										
6/5/73 1535	LSW	SUR.	25											

113

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-7 RIVER MILE 41.6

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/6/73	1640	LSW	SUR.	25.08			6.17		5.69	.967	.420	1.165	.715	1.142	
			10'	24.52											
6/6/73	0945	HSW	SUR.	24.45											
6/7/73	1115	HSW		25			6.43		5.97	1.020			.315	.344	
6/7/73	1735	LSW		24.5				1.89							

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-7 RIVER MILE 41.6

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	PO_4 ppm	TP ppm	Chlor a
7/9/73	1240	HSW	SUR.	28.46	0.09	0.26	4.42								
7/9/73	1900	LSW	SUR.	28.52	0.15	0.2	6.74								
7/10/73	1845	LSW	SUR.	29.55	0.0	0.2	6.47	3.70		.535	.276	.001	.054	.279	41.2
7/10/73	1340	HSW	SUR.	29.75	0.0	0.18	4.43								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-7 RIVER MILE 41.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73 1445	HSW	SUR.	28.72	0.2	0.3	6.12								
7/12/73 1535	HSW	SUR.	27.25	0.0	0.25	6.37	2.31		.875	.231	.808	.232	.658	55.5

117

[illegible] RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-7 RIVER MILE 41.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/9/73 0955	LSW	SUR.	19.24			5.82		8.22	.861	.230	.875	.380	.655	42.0
		10	19.08			5.71								
		AVG.				5.77								
10/9/73 1610	HSW	SUR.	20.30			6.43								
		18	20.30			6.27								
		AVG.				6.35								
10/10/73 1000	LSW	SUR.	19.20	0.00	.20	5.37	2.49	8.02	.853	.200	.745	.405	.722	
		10	20.10	.10	.20	5.35								
		AVG.				5.36								
10/10/73 1547	HSW	SUR.	20.70			7.03								
		10	19.80			6.92								
		AVG.				6.98								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **E-7** RIVER MILE **41.6**

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH$_3$-N ppm	NO$_2$+NO$_3$ ppm	Pi ppm	TP ppm	Chlor A
10/11/73 1050	LSW	SUR.	19.39	0.00	.25	5.70		6.93	.871	.150	.840	.425	.870	
		10	18.55	0.00	3.20	5.49								
		AVG.				5.60								
10/11/73 1611	HSW	SUR.	19.14	0.00	.62	7.07								
		30	20.55	0.00	.52	6.98								
		AVG.				7.02								
10/12/73 1121	LSW	SUR.	19.07	0.00	.28	6.04	3.22	8.18	.757	.070	.645	.320	.700	
		20	18.68	.32	.25	6.18								
		AVG.				6.11								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6C RIVER MILE 43.1

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	0900	HSW		22.6			5.81		5.73	.833	.295	.995	.322	.702	16.5
6/4/73	1455	LSW		25.62											

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6A RIVER MILE 43.5

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	0910	HSW		22.7			5.61		4.94	.900	.340	.995	.339	.725	17.3
6/5/73	0910	HSW	SUR.	23.72			5.66		5.89	.983	.305	.960	.353	.756	
6/6/73	0950	HSW		24.25			5.57		4.62	.967	.375	.975	.530	.860	
6/7/73	1125	HSW		24.4			5.89	1.93	5.94	.987			.465	.708	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6A RIVER MILE 43.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1907	LSW	SUR.	28.03	0.03	0.25	6.91		5.22	.881	.410	1.079	.648	1.074	13.5
7/11/73 1452	HSW	SUR.	29.0	0.16	0.25	5.81	2.40		.824	.232	.813	.300	.709	28.5

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6A RIVER MILE 43.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/9/73 1010	LSW	SUR.	18.52			4.98	2.42	6.27	1.173	.360	1.315	.815	1.313	25.5
10/9/73 1623	HSW	SUR.	20.50			6.07								
		5	20.30			6.07								
		AVG.				6.07								
10/10/73 1005	LSW	SUR.	19.60	.16	.20	4.41		5.29	1.028	.355	1.250	.875	1.228	
10/10/73 1600	HSW	SUR.	20.20			6.35								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6A RIVER MILE 43.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/11/73 1100	LSW	SUR.	17.90	0.00	.32	3.86	1.84	6.61	1.067	.310	1.270	.810	1.245	
10/11/73 1623	HSW	SUR.	18.92	0.00	.38	6.41								
		5	20.28	0.00	.38	6.62								
		AVG.				6.52								
10/12/73 1131	LSW	SUR.	17.88	0.00	.46	5.01		7.19	.866	.170	1.055	.595	1.050	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6B RIVER MILE 43.9

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1000	HSW		22.58			5.38		6.80	.908	.406	1.115	.478	1.002	11.3
6/6/73 1000	HSW		23.95			5.69		5.37	.993	.445	1.130	.645	.995	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6B RIVER MILE 43.9

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/10/73 1347	HSW	SUR.	29.23	0.0	0.18	6.23								
7/10/73 1855	LSW	SUR.	26.6	0.0	0.25	5.43								
7/12/73 1545	HSW	SUR.	24.85	0.0	0.2	5.96								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6 RIVER MILE 44.8

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	0925	HSW		22.18			5.43		4.50	.938	.405	1.250	.518	1.024	16.5
6/5/73	0920	HSW		22.75			5.31		4.61	.958	.375	1.125	.577	1.047	
6/6/73	1005	HSW		23.1			5.58		3.76	.967	.445	1.215	.820	1.184	
6/7/73	1135	HSW		23.4			4.95	1.91	6.55	1.136	.490	1.130	.635	.927	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6 RIVER MILE 44.8

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73	1915	LSW	SUR.	23.35	0.2	0.25	6.23	1.17	6.61	1.885	1.497	.813	1.274	1.501	25.5
7/9/73	1255	HSW	SUR.	27.0	0.12	0.22	5.76								
7/10/73	1857	LSW	SUR.	25.6	0.0	0.3	5.88	1.04		1.540	1.086	.676	1.323	2.758	7.5
7/10/73	1352	HSW	SUR.	27.78	0.0	0.13	6.02								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6 RIVER MILE 44.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73 1500	HSW	SUR.	23.65	0.21	0.18	4.98	4.34		1.118	.591	1.018	.728	2.040	7.5
7/12/73 1548	HSW	SUR.	24.85	0.0	0.2	5.18	2.25		1.078	.311	1.406	.703	1.401	24.0

129

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6 RIVER MILE 44.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/9/73 1028	LSW	SUR.	18.00			4.72	1.86	6.59	1.234	.630	1.710	1.517	1.517	6.0
		10	18.00			4.91								
					AVG.	4.81								
10/9/73 1623	HSW	SUR.	19.80			5.83								
		20	19.70			5.78								
					AVG.	5.80								
10/10/73 1015	LSW	SUR.	17.90	0.00	.18	3.85	1.70	6.29	1.195	.490	1.285	1.200	1.646	
		10	17.30	0.00	.20	3.80								
					AVG.	3.82								
10/10/73 1615	HSW	SUR.	19.84			6.37								
		10	19.50			6.83								
					AVG.	6.6								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-6 RIVER MILE 44.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/11/73 1111	LSW	SUR.	17.85	0.00	.29	5.32	1.35	6.01	1.075	.385	1.415	1.530	1.900	
10/11/73 1630	HSW	SUR.	19.02	0.00	.30	6.29								
		5	19.72	0.00	.32	6.38								
					AVG.	6.3								
10/12/73 1140	LSW	SUR.	16.55	0.00	.50	4.59	1.93	6.89	.873	.190	1.430	1.550	1.550	

131<

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-5B RIVER MILE 45.8

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH$_3$-N ppm	NO$_2$+NO$_3$ ppm	Pi ppm	TP ppm	Chlor a
6/5/73	0925	HSW		22.18			5.45		4.61	1.017	.385	1.400	.810	1.196	
6/6/73	1015	HSW		21.9											
6/7/73	1140	HSW		22.9			4.59		6.62	1.194			.700	.970	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-5B RIVER MILE 45.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1300	HSW	SUR.	26.2	0.13	0.25	4.92								
7/9/73 1922	LSW	SUR.	25.33	0.0	0.18	5.89								
7/10/73 1904	LSW	SUR.	26.27	0.0	0.3	5.96	2.28		.856	.331	1.339	.699	1.496	15.0
7/10/73 1356	HSW	SUR.	27.93	0.0	0.13	6.31								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-5B RIVER MILE 45.8

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73	1506	HSW	SUR.	26.48	0.25	0.33	6.43								
7/12/73	1550	HSW	SUR.	24.25	0.0	0.3	5.26	2.46		1.140	.525	1.395	.691	1.318	21.0

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-5B RIVER MILE 45.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/9/73 1040	LSW	SUR.	17.32			5.34		6.74	1.402	.740	1.500	1.700	1.700	27.0
		10	17.30			5.10								
		AVG.				5.22								
10/9/73 1640	HSW	SUR.	19.30			5.80								
			19.10			5.39								
		AVG.				5.59								
10/10/73 1025	LSW	SUR.	17.10	0.00	2.20	4.20	1.82	5.51	1.251	.565	1.740	1.305	1.700	
		10	18.60	0.00	.24	4.43								
		AVG.				4.32								
10/10/73 1625	HSW	SUR.	19.50			5.33								
		10	18.90			7.89								
		AVG.				6.61								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-5B RIVER MILE 45.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/11/73 1116	LSW	SUR.	18.96	0.00	.24	5.16		5.80	1.294	.670		1.400	2.250	
		10	16.52	0.00	.28	4.52								
		AVG.				4.84								
10/11/73 1635	HSW	SUR.	18.36	0.00	.34	5.85								
		10	19.38	0.00	.30	5.82								
		AVG.				5.84								
10/12/73 1147	LSW	SUR.	17.03	0.00	.37	4.24	2.28	6.61	1.059	.415	1.755	1.800	1.800	
		20	16.50	0.00	.42	4.20								
		AVG.				4.22								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-5 RIVER MILE 47.4

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	0935	HSW		21.31			6.13		6.48	.773	.285	1.650	.800	1.112	11.3
6/5/73	0930	HSW		20.05			6.09		3.42	.833	.270	1.510	.906	1.194	
6/6/73	1015			21.9			5.29		5.90	1.019	.375	1.100	.790	1.169	
6/7/73	1145	HSW		22.1			5.49	1.61	6.80	.995	.410	1.335	.760	1.006	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-5 RIVER MILE 47.4

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1930	LSW	SUR.	26.04	0.0	0.2	6.03	1.90	3.69	.807	.405	1.635	1.044	1.378	4.5
7/9/73 1310	HSW	SUR.	25.65	0.1	0.21	6.33								
7/10/73 1910	LSW	SUR.	25.4	0.0	0.18	6.03	1.83		.856	.337	1.454	.806	1.046	6.0
7/10/73 1402	HSW	SUR.	27.55	0.11	0.13	7.10								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-5 RIVER MILE 47.4

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/9/73 1047	LSW	SUR.	17.40			5.83	2.3	5.26	1.417	.815	1.500	2.117	2.117	3.0
		10	16.40			6.03								
		AVG.				5.93								
10/9/73 1650	HSW	SUR.	18.50			4.56								
		10	18.10			4.72								
		AVG.				4.64								
10/10/73 1035	LSW	SUR.	17.50	0.00	.20	5.04		5.32	1.363	.715	1.400	2.123	2.123	
		10	17.20	0.00	.20	5.10								
		AVG.				5.07								
10/10/73 1635	HSW	SUR.	18.54			4.60								
		10	18.00			7.51								
		AVG.				6.06								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-5 RIVER MILE 47.4

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/11/73	1511	HSW	SUR.	25.1	0.2	0.25	7.07	3.19		.899	.365	1.730	.914	1.463	7.5
7/12/73	1600	HSW	SUR.	24.85	0.0	0.25	6.10	3.65		1.149	.429	1.539	.682	1.451	54.0

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-5 RIVER MILE 47.4

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/11/73 1125	LSW	SUR.	18.00	0.00	.35	5.24	1.98	5.93	1.380	.755		2.050	2.550	
		10	16.69	0.00	.31	6.46								
		AVG.				5.85								
10/11/73 1645	HSW	SUR.	18.40	0.00	.28	4.62								
		15	17.68	0.00	.32	4.74								
		AVG.				4.68								
10/12/73 1200	LSW	SUR.	16.30	0.00	.25	5.10		6.31	1.244	.615		2.000	2.550	
		20	17.70	0.00	.33	5.09								
		AVG.				5.10								

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-3 RIVER MILE 51.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/11/73 1105		SUR.	18.50			5.64	2.51	5.09	1.549	.930		3.350	3.440	
10/12/73 1145		SUR.	17.00			5.50	3.56	6.96	1.542	.915		2.900	3.425	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-2 RIVER MILE 54.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1836			20			7.04		3.83	.863	.305	1.800	1.096	1.571	18.0
6/5/73 1848			22.5			6.05		9.32	1.233	.280	1.185	.732	1.653	
6/6/73 1657						6.39		7.64	1.127	.450	1.268	.980	1.582	
6/7/73 1700			23.0			6.46	2.86	6.30	1.194			1.120	1.537	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-2 RIVER MILE 54.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1630	LSW	SUR.	24.6			6.04		5.11	.897	.933	1.650	1.144	1.693	12.0
7/10/73 1500	LSW	SUR.	25.5			5.68			1.164	.549	1.816	1.338	13.196	
7/11/73 1530	HSW	SUR.	25			4.94			1.269	.543	1.697	.968	1.895	
7/12/73		SUR.	23			5.66	2.75		1.238	.5 79	1.688	1.206	2.206	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 12 RIVER MILE 68.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1340		SUR.	24.4			5.41		5.26	1.421	.822	1.259	1.444	1.834	1.5
7/10/73 1210		SUR.	24.5			4.29	3.80		2.135	1.416	1.307	2.241	2.886	
7/11/73 1200		SUR.	23			7.13			2.173	1.599	1.341	2.426	2.869	
7/12/73 1130		SUR.	21			4.22			2.555	3.475	1.778	1.992	2.047	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 13 RIVER MILE 71.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1449			19			8.02		3.14	1.080	.525	1.485	.906	1.186	5.3
6/5/73 1454			19.5			7.09		7.44	1.508	.705	1.065	.832	1.198	
6/6/73 1314			18			7.84		4.01	1.079	.495	1.155	.805	1.022	
6/7/73 1300			18.0			7.79	2.05	4.24	.987			.920	1.065	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-1 RIVER MILE 60.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1540		SUR.	24.8			6.16		4.35	1.079	.915	1.650	1.469	1.996	18.0
7/10/73 1430		SUR.	25.5			5.27	3.04		1.232	.646	1.776	1.533	1.792	
7/11/73 1430		SUR.	25			6.40			1.353	.556	1.798	1.761	2.324	
7/12/73 1330		SUR.	22.5			5.68			1.520	.924	1.779	1.532	2.405	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 9 RIVER MILE 63.5

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	1710			22			7.16		4.04	1.227	.675	1.783	1.705	2.055	6.0
6/5/73	1718			23			6.56		9.17	1.208	.355	1.055	.924	1.487	
6/6/73	1533			22.5			6.83		5.63	1.295	.605	1.285	1.260	1.654	
6/7/73	1530			22.5			6.76		5.23	1.260			1.485	1.731	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 9 RIVER MILE 63.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1452			26			6.09		5.32	1.260	.896	1.770	1.560	1.919	10.5
7/10/73 1345		SUR.	26			5.40			1.805	1.118	1.713	2.066	2.127	
7/11/73 1355		SUR.	24.5			5.53	3.86		1.505	.616	1.785	1.941	2.465	
7/12/73 1245		SUR.	22			6.18			1.565	1.046	1.706	1.788	2.266	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 9-A RIVER MILE 63.7

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1640			20			7.37		3.54	1.298	.675	1.705	1.705	2.055	10.5
6/6/73 1513			21			6.97		7.05	1.304	.604	1.215	1.115	1.190	
6/7/73 1510			21.0			6.66		4.89	1.389			1.358	1.610	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 9-A RIVER MILE 63.7

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1500		SUR.	24.0			5.98	3.52	5.51	1.501	1.145	1.168	1.686	2.452	6.0
7/10/73 1400		SUR.	24.5			5.18	3.15		2.071	1.381	1.773	2.466	2.639	
7/11/73		SUR.	23.5			5.76	4.58		2.169	1.558	1.099	2.444	3.212	
7/12/73 1300		SUR.	21.0			5.41	3.89		2.396	1.550	1.815	.235	3.061	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 10-A RIVER MILE 64.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1605			22			7.97		6.58	4.275	6.050	1.440	.420	4.738	9.0
6/6/73 1500			21			7.40		6.95	2.745	2.800	1.120		2.880	
6/7/73 1440			20.0			7.25		6.11	2.106			2.230	2.238	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 10-A RIVER MILE 64.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1425		SUR.	24.0			6.70		7.75	3.804		.995	3.928	4.770	16.5
7/10/73 1320		SUR.	24.5			5.80			3.534	.736	1.616		3.515	
7/11/73 1330		SUR.	23			5.13			4.279	3.645	.879	5.392	6.062	
7/12/73 1215		SUR.	21			5.78			2.758	3.589	1.818	.286	3.478	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 11 RIVER MILE 66.4

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	1530			19			7.97		3.92	.750	.185	1.520	.488	1.106	9.8
6/5/73	1535			21			6.47		7.49	.750	.155	.805	.335	.725	
6/6/73	1423			19.5			7.46		4.51	.906	.290	1.175	.712	.850	
6/7/73	1415			20.0			7.37	1.88	5.27	.912			.720	.898	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 11 RIVER MILE 66.4

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73	1400		SUR.	23.2			6.03	1.96	4.19	.897	.421	1.124	1.228	1.459	6.0
7/10/73	1250		SUR.	23.5			5.40			1.155	.497	1.172	1.366	4.924	
7/11/73	1230		SUR.	23			6.91	3.42		1.379	.693	1.407	2.048	2.324	
7/12/73	1200		SUR.	21			5.20	3.40		1.198	.422	1.828	1.391	1.391	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 12 RIVER MILE 68.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1515			19.5			7.98		2.67	.765	.225	1.425	.674	.875	7.5
6/5/73 1520			21			6.77		7.39	.833	.260	.865	.475	.868	
6/6/73 1405			20			7.93		4.59	.906	.205	1.095	.525	.676	
6/7/73 1345			20.0			7.76	1.28	3.80	.837			.575	.708	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-2 RIVER MILE 54.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
10/9/73 1340		SUR.				6.12	3.16	5.67	1.802	1.115	1.575	3.217	3.217	1.5
10/10/73 1400		SUR.	19.50			6.35	2.70	5.18	1.610	.970	1.700	3.003	3.003	
10/11/73 1235		SUR.	20.00			6.12	3.54	5.82	1.780	1.140		3.700	3.700	
10/12/73 1120		SUR.	17.00			6.15	2.85	5.68	1.569	.925		3.050	3.500	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. E-1 RIVER MILE 60.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1823			22			6.79		3.57	1.073	.510	1.885	1.694	1.977	6.0
6/5/73 1909			22.5			6.42		8.35	1.225	.320	1.090	.893	1.582	
6/6/73 1634			23			6.31		6.71	1.226	.550	1.350	1.305	1.792	
6/7/73 1630			22.5			6.59		5.23	1.177			1.440	1.738	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 13 RIVER MILE 71.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1250		SUR.	23.0			6.15		5.05	1.317	.850	1.016	1.453	1.806	4.5
7/10/73 1115		SUR.	23			4.60			3.157	2.762	1.620		3.033	
7/11/73 1110		SUR.	22.0			7.07			2.396	1.535	1.716	2.192	3.010	
7/12/73 1045		SUR.	20.0			3.05	5.26		3.200	3.895	1.519	3.168	3.538	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 13-A RIVER MILE 72.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1437			18			7.97		2.69	1.350	.835	1.425	.516	1.436	5.3
6/5/73 1424			19			7.33		6.34	1.683	.890	1.055	.930	1.347	
6/6/73 1329			18			8.08		3.43	1.373	.855	1.155	1.035	1.215	
6/7/73 1310			18.0			8.16	2.72	5.42	1.252			1.025	1.138	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 13-A RIVER MILE 72.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1305		SUR.	22.7			5.58		6.73	2.429	2.217	1.481	2.762	3.706	3.0
7/10/73 1130		SUR.	23.0			4.81	5.72		2.507	1.933	1.465	2.516	4.628	
7/11/73 1130		SUR.	23			8.56			3.489	2.436	1.389	3.324	3.819	
7/12/73 1100		SUR.	19.5			5.32			2.528	3.341	1.422	2.179	2.564	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 13-C RIVER MILE 73.7

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1427			18			8.52		3.41	1.545	.985	1.360	1.156	1.422	9.0
6/5/73 1413			20			7.65		7.26	1.850	1.065	1.100	1.022	1.411	
6/6/73 1338			18			8.32		4.12	1.658	1.065	1.140	1.050	1.280	
6/7/73 1320			18.0			8.26	2.45	5.94	1.310			1.170	1.259	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 13-C RIVER MILE 73.7

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1315		SUR.	22.5			5.96	4.59	7.76	3.557	2.993	1.271	3.569	4.523	3.0
7/10/73 1135		SUR.	24.5			5.28			3.602	3.185	1.269		3.151	
7/11/73 1120		SUR.	22.5			9.26	7.50		2.127	1.550	1.516	1.887	2.222	
7/12/73 1110		SUR.	20.5			6.06	3.71		3.085	3.742	1.250	2.724	3.259	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 13-D RIVER MILE 74.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1345			21			8.43		7.71	3.000	2.550	1.240	.177	2.132	7.5
6/5/73 1210			19			7.45		10.97	4.525	3.650	.960	2.329	3.264	
6/6/73 1120			22			8.49		4.08	1.144	.450	1.125	.478	.550	
6/7/73 1130			18.0			8.11	1.26	8.05	2.280			2.450	2.268	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 13-D RIVER MILE 74.6

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1125		SUR.	22.5			6.76	1.36	12.95	7.237	7.076	.876	2.063	7.744	15.0
7/10/73 1035		SUR.	24.0			6.03			7.170	7.125	.768		5.140	
7/11/73 1035		SUR.	22.5			7.27			9.247	6.388	.788	7.799	10.043	
7/12/73 1015		SUR.	19.5			6.02			9.193	8.057	.684	8.719	10.236	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 14-A RIVER MILE 75.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1205			18			8.76		4.62	.848	.185	1.310	.081	.290	4.5
6/5/73 1232			18			8.30		5.84	.792	.200	1.175	.124	.415	
6/6/73 1140			19			8.90		2.84	.837	.200	1.455	.200	.227	
6/7/73 1200			18			8.45		3.58	.738			.065	.139	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **14-A** RIVER MILE **75.5**

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73	1030		SUR.	21.2			7.01	2.01	4.30	.832	.360	1.077	.337	.665	6.0
7/10/73	0955		SUR.	22.5			6.59	1.95		.967	.517	1.023	.493	1.103	
7/11/73	1000		SUR.	21.5			6.66	5.40		.975	.228	1.039	.054	.317	
7/12/73	0940		SUR.	19.5			7.37	1.38		.937	.363	.951	.166	.396	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 14-B RIVER MILE 77.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 0950			11.5			8.86		3.06	.713	.215	1.330	1.373	1.420	6.0
6/5/73 1008			17			8.70		4.99	.771	.230	1.235	.205	.360	
6/6/73 0933			16			8,96		3.12	.777	.235	1.165	.180	.181	
6/7/73 0915			17.0			8.60	1.18	3.20	.771			.092	.110	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 14-B RIVER MILE 77.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1005		SUR.	20.3			7.89		5.11	1.194	.647	1.023	.552	.817	3.0
7/10/73 0935		SUR.	20			7.76			1.018	.528	.996	.544	.788	
7/11/73 0940		SUR.	20			5.96			1.353	.725	1.017	.131	.339	
7/12/73 0920		SUR.	17.5			8.04			1.220	.735	.971	.316	.502	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 14-D RIVER MILE 77.7

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 0940			17			8.75		3.32	.518	.095	1.300	.035	.177	4.5
6/5/73 0955			18			8.69		4.61	.595	.105	1.220	.028	1.220	
6/6/73 0921			17			9.05		2.42	.725	.115	1.140		.142	
6/7/73 0905			17			8.73	1.40	3.09	.639			.043	.083	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. 14-D RIVER MILE 77.7

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73	0940		SUR.	20.5			7.93	1.22	4.61	.634	.240	1.046	.032	.129	6.0
7/10/73	0920		SUR.	20.5			7.96	1.11		.744	.326	.985	.149	.750	
7/11/73	0930		SUR.	19.5			7.33	1.98		.782	.198	1.019	.050	.179	
7/12/73	0915		SUR.	17.0			8.28	1.05		.796	.214	1.035	.018	.081	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-1 RIVER MILE 0.2

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH$_3$-N ppm	NO$_2$+NO$_3$ ppm	Pi ppm	TP ppm	Chlor A
6/5/73 1825			24			6.83		8.35	1.125	.295	1.280	.867	1.611	
6/6/73 1620			24			6.70		6.75	1.355	.565	1.395	1.345	1.929	
6/7/73 1615			23			6.66	2.96	5.21	1.185			1.555	1.838	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-1 RIVER MILE 0.2

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1445		SUR.	26			6.15	3.48	4.71	1.251	.706	1.637	1.560	1.748	3.0
7/10/73 1427		SUR.	25			5.61	2.87		1.600	1.035	1.704		1.339	
7/11/73 1430		SUR.	24.5			4.72	3.74		1.387	.771	1.729	2.030	2.182	
7/12/73 1305		SUR.	23.0			6.51	3.00		1.441	.748	1.666	1.737	1.788	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-1A RIVER MILE 1.8

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	1745			24			7.27		5.28	1.838	1.140	1.705	2.505	2.497	3.8
6/5/73	1735			24			6.79		11.98	1.725	.600	1.290	1.159	1.847	
6/6/73	1548			23.5			7.01		7.51	1.839	1.165	1.350		2.052	
6/7/73	1545			23.0			6.92	2.60	6.64	1.592				1.865	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-2 RIVER MILE 2.8

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 1800			23			7.40		3.46	.833	.350	1.860	1.657	1.886	2.3
6/5/73 1758			23											
6/6/73 1601			23.5			7.06		8.07	1.114	.320	1.405	1.430	1.814	
6/7/73 1605			24.0			6.98		5.28	.953			1.580	1.720	

175<

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-2 RIVER MILE 2.8

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pf ppm	TP ppm	Chlor a
7/9/73	1423		SUR.	27			6.47		5.12	.848	.342	1.611	1.616	1.661	10.5
7/10/73	1400		SUR.	26			6.35			1.052	.534	1.564	1.433	2.502	
7/11/73	1415		SUR.	25.5			5.48	2.44		1.034	.338	1.599	1.456	1.738	
7/12/73	1252		SUR.	23			7.03			1.052	.311	1.625	1.212	1.212	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-3 RIVER MILE 6.5

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	0741			19.5			7.59		4.19	.720	.270	1.790	.578	1.673	3.8
6/5/73	0822			21.0			7.25		10.10	1.525	.890	1.185	2.052	2.665	
				21.0											
6/6/73	0817			22			7.18		7.67	1.787	1.055	1.250		3.154	
6/7/73	0805			22			7.19		5.96	1.409			1.465	1.793	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-3 RIVER MILE 6.5

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH$_3$-N ppm	NO$_2$+NO$_3$ ppm	Pi ppm	TP ppm	Chlor a
7/9/73	0938		SUR.	25			7.02	1.76	5.31	1.211	.730	1.532	1.704	2.071	12.0
7/10/73	1008		SUR.	25			6.67			1.305	.751	1.463	1.674	2.432	
7/11/73	0916		SUR.	24			5.80			1.261	.635	1.488	1.725	2.122	
7/12/73	0920		SUR.	21.5			7.03			1.229	.510	1.548	1.372	1.372	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-2B RIVER MILE 6.7

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 0821			20			7.67		4.00	.675	.260	1.765	1.513	1.626	3.0
6/5/73 0806			20.5			7.25		6.78	.775	.165	1.435	1.131	1.748	
6/6/73 0806			21.5			7.02		6.04	1.105	.302	1.525	1.405	1.688	
6/7/73 0755			22			7.02		4.65	1.036				1.526	

PATUXENT RIVER/ESTUARY SAMPLING-STATIONS

STATION NO. L-2B RIVER MILE 6.7

Date-Time	Tide	Depth	Temp °C	Salin ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 0910		SUR.	24.5			6.67		4.67	.790	.288	1.620	1.723	1.900	9.0
7/10/73 0943		SUR.	25			6.48	2.36		.916	.410	1.528	1.466	2.442	
7/11/73 0900		SUR.	24			7.37			1.000	.370	1.582	1.581	2.102	
7/12/73 0900		SUR.	21			6.88			.928	.275	1.639	1.232	1.232	

180<

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-5A RIVER MILE 11.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	PI ppm	TP ppm	Chlor a
6/4/73 0913			19.5			8.28		4.97	1.335	.805	1.660	1.965	2.132	4.5
6/5/73 0916			21.0			7.90		8.57	.983	.315	1.445	1.035	1.686	
6/6/73 0850			21.5			7.53		8.76	1.960	1.375	1.415	.415	3.724	
6/7/73 0840			22			7.35	0.87	7.94	1.882			3.350	3.408	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-5A RIVER MILE 11.0

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1020		SUR.	25.0			7.25	.84	5.12	1.144	.637	1.632	2.063	2.248	4.5
7/10/73 1050		SUR.	25.0			7.17			1.848	1.182	1.485	2.283	3.348	
7/11/73 0955		SUR.	23.5			5.43			1.496	.781	1.384	2.084	2.708	
7/12/73 0943		SUR.	20.5			7.73			1.485	.687	1.439	1.414	1.590	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS
STATION NO. L-5B RIVER MILE 11.2

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73 0900			19.5			8.17		3.79	.735	.315	1.715	.549	1.804	2.3
6/5/73 0904			20.5			7.91		8.15	.767	.110	1.480	.604	1.173	
6/6/73 0856			21.5			7.57		6.89	1.205	.345	1.443	1.663	2.206	
6/7/73 0840			21.5			7.48		5.03	.937			1.350	1.774	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-5B RIVER MILE 11.2

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor A
7/9/73	1030		SUR.	25			7.30	1.42	3.70	.741	1.345	1.479	1.722	1.731	4.5
7/10/73	1040		SUR.	25			7.32			.890	.329	1.397	1.499	1.694	
7/11/73	1006		SUR.	23.5			4.52			.950	.297	1.391	1.761	2.021	
7/12/73	0953		SUR.	20.5			7.87			.884	.193	1.506	1.093	1.093	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-6 RIVER MILE 12.7

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH$_3$-N ppm	NO$_2$+NO$_3$ ppm	Pi ppm	TP ppm	Chlor a
6/4/73	1050			21			8.10		3.04	.758	.200	1.625	1.141	1.181	3.0
6/5/73	1111			22			7.98		8.37	.950	.110	1.575	.665	1.248	
6/6/73	1041			22			7.52		4.94	.881	.205	1.350	1.370	1.448	
6/7/73	1045			21.5			7.15		4.66	1.152				.877	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-6 RIVER MILE 12.7

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2-NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73	1315		SUR.	26			7.40		3.95	.642	.176	1.364	1.542	1.630	10.5
7/10/73	1158		SUR.	26			7.21	1.58		.727	.212	1.366	1.316	1.595	
7/11/73	1305		SUR.	24			4.39			.790	.180	1.309	1.427	1.758	
7/12/73	1117		SUR.	21			7.67	1.46		.840	.116	1.404	1.213	1.435	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. **L-6A** RIVER MILE **12.8**

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor
6/4/73 1137			21			7.94		6.97	.885	.410	1.440	.582	1.148	4.5
6/5/73 1125			21			7.65		7.88	.825	.190	1.065	.218	.605	
6/6/73 1034			22			7.18		4.98	1.165	.475	1.020	.705	.993	
6/7/73 1050			21.5			7.62	1.71	4.58	.904			.580	1.021	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-6A RIVER MILE 12.8

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH$_3$-N ppm	NO$_2$+NO$_3$ ppm	Pi ppm	TP ppm	Color U
7/9/73	1307		SUR.	25			6.71		4.45	1.095	.534	1.604	.746	.895	3.0
7/10/73	1250		SUR.	25			6.81			1.224	.549	1.620	1.999	1.260	
7/11/73	1320		SUR.	24			5.11	2.62		.849	.209	1.362	.596	.768	
7/12/73	1108		SUR.	20.5			7.21			1.158	.368	1.648	1.233	1.646	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-7C RIVER MILE 15.5

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2-NO_3 ppm	Pi ppm	TP ppm	Chlor a
6/4/73	1035			20.5			8.98		5.39	1.898	1.353	2.000	7.977	7.445	3.0
6/5/73	1045			21.5			8.38		11.83	1.284	.388	1.950	5.785	7.137	
6/6/73	0958			21			7.61		44.50	3.237	.915	1.700	5.750	11.479	
6/7/73	0950			21			8.76	0.21	8.53	4.684				6.571	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-7C RIVER MILE 15.5

Date-Time	Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73 1130		SUR.	26			8.67	1.32	4.06	.675	.231	1.152	1.776	1.860	4.5
7/10/73 1135		SUR.	25.5			8.72			.684	.217	1.266	1.350	1.910	
7/11/73 1052		SUR.	23.5			4.28			.908	.351	1.246	1.456	1.738	
7/12/73 1030		SUR.	21.5			9.48			.787	.086	1.446	1.233	1.570	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-7D RIVER MILE 15.7

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD$_5$ ppm	TOC ppm	TKN ppm	NH$_3$-N ppm	NO$_2$+NO$_3$ ppm	Pi ppm	TP ppm	Chlor a
6/4/73	1020			20.5			9.40		3.90	.375	.060	1.460	.035	.077	2.3
6/5/73	1030			21.5			8.37		8.82	.533	.065	1.480	.122	.843	
6/6/73	0952			22			8.57		3.58	.820	.070	1.165	.110	.218	
6/7/73	0950			21.5			8.63	0.81	3.44	.580			.080	.172	

PATUXENT RIVER/ESTUARY SAMPLING STATIONS

STATION NO. L-7D RIVER MILE 15.7

Date-Time		Tide	Depth	Temp °C	Salin. ppt	Cond.	DO ppm	BOD_5 ppm	TOC ppm	TKN ppm	NH_3-N ppm	NO_2+NO_3 ppm	Pi ppm	TP ppm	Chlor a
7/9/73	1120		SUR.	25.5			9.66	.68	3.24	.453	.033	1.081	.032	.096	4.5
7/10/73	1120		SUR.	25.5			10.72	1.43		.513	.125	.919	.018	.994	
7/11/73	1040		SUR.	23.5			4.74	1.42		.597	.110	1.080	.016	.117	
7/12/73	1013		SUR.	20.0			10.53	1.27		.601	.029	1.097	.034	.135	